

VOL. V.

NOVEMBER, 1898.

No. 5.

THE LARYNGOSCOPE

A MONTHLY JOURNAL
DEVOTED TO DISEASES OF THE
NOSE - THROAT - EAR

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ST. LOUIS, MO

OFFICE OF PUBLICATION, ST. LOUIS, MO.
FOREIGN OFFICE: JOHN WRIGHT & CO., BRISTOL, ENG.

[Entered at the Post Office at St. Louis, Mo., as Second-Class Matter, in July, 1896.]

Official Organ American Laryngological, Rhinological and Otological
Society, Southern Section.

Official Organ Western Otological, Laryngological and Rhinological
Association.

Official Organ New York Academy of Medicine, Laryngological Section.

AN AMERICAN AND FOREIGN EDITION PUBLISHED SIMULTANEOUSLY. •

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THE LARYNGOSCOPE.

VOL. V. ST. LOUIS, MO., NOVEMBER, 1898. No. 5.

ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

NASAL HYDRORRHŒA.*

BY ST. CLAIR THOMSON, M.D., M.R.C.P. LOND., F.R.C.S. ENG.

Physician to the Throat Hospital, Golden Square; Surgeon to the Royal Ear Hospital,
London.

Attention appears to have been first attracted to this subject by Bosworth in 1889 by a chapter devoted to nasal hydrorrhœa in his well-known "Diseases of the Nose and Throat." He therein collected and published eighteen cases of which he considered the details were sufficiently clear to warrant them being embraced under the heading of nasal hydrorrhœa. A critical examination of these eighteen cases has forced the author to the conclusion that six of them were undoubtedly instances of other morbid affections and that nine were most probably dependent upon pathological conditions quite unconnected with the nasal mucosa, so that of the original eighteen cases only three really justify their association under the title of nasal hydrorrhœa. The author has been led to this view by his studies in connection with a case shown before the Laryngological Society of London, where, in an otherwise perfectly healthy subject, cerebro-spinal fluid with rare intermissions escapes day and night from one side of the nose. This case, together with

*Author's abstract of a paper read at the Edinburgh Meeting of the British Medical Association, 1898.

the reports by other observers of seven undoubtedly similar cases, and twelve cases which were most probably identical, will be found fully recorded in Vol. lxxxii of the *Medical and Chirurgical Transactions*, 1898. It is claimed that of Bosworth's eighteen cases of nasal hydrorrhœa no less than thirteen were most probably instances of what should be called cerebro-spinal rhinorrhœa. In the communication to the *Medical and Chirurgical Transactions* each of these thirteen cases is considered separately.

The writer deals at length with the chemical and clinical signs which distinguish cerebro-spinal fluid from intra-nasal secretion, and considers the question of the possibility of the hydrorrhœa originating in the accessory sinuses of the nose. Excluding all cases in which the discharge simply traversed the nose on its way from other cavities and all those in which it is due to direct or reflex irritation, the conclusion is arrived at that what has been regarded as a distinct morbid entity is in the majority of cases but a symptom of various affections. Yet it is held that the term of nasal hydrorrhœa may still be preserved if we limit it by defining the affection as one in which there is profuse watery discharge secreted by the nasal mucosa and not dependent on intra-nasal or neighboring sources of irritation. The amount of the fluid may vary from only what the patient would term a slight running, up to as much as a pint in the twenty-four hours. The clinical picture of nasal hydrorrhœa shades off in one direction into cases of what are generally called hay fever or paroxysmal rhinitis, with symptoms of intense local irritation, while in the other direction they may consist of a passive and almost painless watery discharge from the nose.

It appears to be an affection of adult life affecting males and females indifferently. Although it may be more marked on one side than on the other, the flow usually takes place from both nostrils. When handkerchiefs are soaked with it they generally dry stiff.

The author's contribution only claims to have advanced the matter one step by distinctly differentiating those cases where the nasal watery flow is really an escape of cerebro-spinal fluid. The importance of making this differential diagnosis is obvious. When such a character of the fluid is suspected it is important to avoid any local interference, from the risk of infection. In the cases presenting the conditions to which it is proposed to limit the term nasal hydrorrhœa the treatment can be only such as we have all tried in cases of hay fever. That is to say, quite empiric, with occasional brilliant results and frequent failures. A plea is entered for mod-

eration in the energy with which so many practitioners use the galvano-cautery. The mucous membrane is easily destroyed, and while the formation of scar tissue may give a sense of immediate relief, the after results may be worse than the original disease. Careful general treatment, hygienic, dietetic and climatic, with possibly a visit to a suitable spot will generally secure very satisfactory results.

Purulent Discharge from the Nose; Clinical Significance and Differential Diagnosis—GEORGE E. SHAMBAUGH, Chicago—*Med. Standard*, September, 1898.

In a discussion of the subject the author arrives at the following conclusions:

1. Purulent discharge from the nose is a common symptom of intranasal disease.
2. Its presence may be detected by the patient, but often he complains only of the secondary symptoms produced by the pus.
3. Older writers described all these cases as "purulent rhinitis," etc., and never suspected what we now know to be true, that in the majority of cases the pus has its origin in one of the accessory cavities of the nose.
4. Pus in the nose may come from (*a*) disease in the nose itself (*b*), suppuration in the accessory sinuses (*c*), or suppuration in post-nasal space.
5. The diseases in the nose are (*a*) purulent rhinitis, found in children, in acute infectious fever, in acute rhinitis and gonorrhœal infection (*b*), ulceration, either traumatic as the erosion in the anterior nares, the idiopathic perforation, ulceration due to action of chemical agents, foreign bodies, larvæ of insects and perichondritis; or tubercular or syphilitic.
6. The accessory sinuses of the nose form two groups: the first group, including the maxillary and frontal sinuses and the anterior ethmoid cells, opens into the middle meatus of the nose. The second group, including the sphenoid and posterior ethmoid cells, opens into the olfactory space between the middle turbinated bone and the septum.
7. A differential diagnosis of diseases of these cavities is one of the most difficult problems in rhinology. It requires a knowledge of the whole field of the technic of intranasal examination and a thorough knowledge of the complicated anatomy of the nose and its accessory sinuses.

STEIN. (BISHOP.)

CASE OF HAY ASTHMA—TURBINECTOMY, FOLLOWED BY IMMEDIATE AND COMPLETE RELIEF.

BY L. B. LOCKARD, M.D., TOLEDO, OHIO.

J. F., aged forty-seven, came to me with the following history: Six years ago had his first attack of hay fever, beginning in the latter part of August and continuing until the first frost. Each year thereafter the attack recurred at about the same time; ever with increased severity.

For the past three years, about the middle of the second week, asthmatic symptoms have developed, until, in the present attack, they predominate over the pure hay-fever manifestations.

To the great dyspnoea is added an harassing cough, copious nasal discharge and violent attacks of sneezing. Upon examination the turbinate bodies of the left side were found to be slightly œdematous and bluish gray in color. The right inferior turbinate was so œdematous that it filled the entire anterior nares, and, being freely movable, resembled greatly a mucous polyp.

At 7 o'clock of the same night the anterior end of this turbinate was removed with the cold snare and after ninety minutes, there being no hemorrhage, the patient was permitted to go home. No packing was introduced in order to do away with all unnecessary irritation. Fifteen grains of chloral at bed time on the night of operation was the only medicine administered throughout the entire attack. He returned two days later with the statement that from the moment of operation he had been absolutely free from every manifestation of the disease. This, despite the fact, that he returned to work the following morning in a retail seed store where the air is constantly impregnated with dust. Three weeks have now passed and there has been no return. While a cure cannot be claimed, the abrupt termination of all symptoms was certainly remarkable.

ALBUMINURIC TONSILLITIS—REPORT OF A CASE OF SPONTANEOUS HEMORRHAGE FROM THE LEFT TONSIL.

DR. GEO. F. KEIPER, A.M., M.D., LA FAYETTE, IND.

Eye, Ear and Throat Surgeon to St. Elizabeth Hospital, St. Joseph Orphan Asylum,
Indiana State Soldiers' Home, Etc.

On April 19, 1898, Dr. M. M. Lairy, of this city, kindly referred to me Mr. R., unmarried, for inflammation of the throat. His age is thirty-two. His appearance is of one having grave kidney trouble, for which the doctor was prescribing. The urine contained large quantities of albumen. His personal history is a clean one. He has been losing strength and appetite. For several days he has been unable to sleep of nights lying down in bed, but has been compelled to obtain sleep as best he could sitting in his chair.

Examination of the throat revealed at the superior portion of the left tonsil an ulcer the size of a gold dollar. It was covered with an exudate which resembled that seen in diphtheria. This was easily removed without causing any bleeding of the surface underneath. After removal the tonsil appeared as if some one had ruthlessly scooped out a piece with a sharp spoon. It was treated locally with a 12½ per cent solution of argentum nitrat. Dr. Lairy looked after the general condition. Again, on the morning of April 21, the same application was made after removing the exudate. At four o'clock the same day I was called to his residence and found him bleeding from the spot of ulceration. The hemorrhage was only moderate in amount, yet sufficient to be distressing to the patient and annoying and alarming to the family. A mixture composed of equal parts of dry tannic acid and antipyrin was put into the ulcerated spot and the hemorrhage ceased immediately. At seven p. m. I was again summoned and found the patient bleeding again. This time it was worse. For two hours he bled in spite of the above mixture and injections, hypodermically, of ergot and hot water. He was then taken to St. Elizabeth Hospital in order that the cautery might be used, but soon after his arrival the hemorrhage began to lessen and finally ceased, to recur no more. The patient's general condition became worse, however, and finally, on April 28, just nine days after I first saw him, he died.

This is a remarkable case. The literature at my command does not

parallel it. In searching for an explanation of the phenomena presented I find one concerning the similar phenomena of albuminuric retinitis, in the third volume of "Norris and Oliver's System of Diseases of the Eye," on page 524, at the bottom of the page, which fits our case.

The article was written by Joseph Schöbl, M. D., of the University of Prague, which is translated by Adolf Alt, M. D., of St. Louis, Mo. He says: "The most important changes are found in the blood vessels, especially in the arteries. In 1857 Heinrich Müller saw a case of Bright's disease in which the blood vessels, especially those of the choroid, were narrowed by proliferation and fatty degeneration of their endothelium. Leber found in albuminuric retinitis that the walls of the arteries were changed into a homogeneous yellow shining tube with narrow lumen; this was the case especially with the small arteries and capillaries, while the larger arteries showed no sclerosis, but merely moderately thickened walls. The work of Duke Karl Theodor is of especial importance concerning this point. The main factor in the pathogenesis of albuminuric retinitis he considers to be an arteritic process of all the blood vessels of the eye, either an endo, or a meso, or a peri-arteritis, with narrowing of the lumen, especially of the smaller vessels. This explains the inflammatory and degenerative processes and the hemorrhage in the retina and choroid. * * * These circulatory conditions in the retina and choroid, which somewhat resemble those found in the kidneys, bring about a condition, especially after the area of the renal blood vessels has been obliterated and the blood pressure is accordingly increased, in which the blood stream is retarded in these two membranes and the toxic substance in the blood remains longer in contact with the blood vessels' walls, and hence causes their diseased condition. When the lamina are considerably reduced or obliterated, a dropsical necrosis results as well as an extravasation of the constituents of the blood and hemorrhages. * * * Michel has found hyaline degeneration of the walls of the arteries in the retina, choroid and kidneys and considers these changes due to a common cause."

What is thus true of retina and choroid in blood vessel changes undoubtedly is true with reference to the changes which took place in the blood vessels of the tonsils of the case reported above. No autopsy was obtained in the above case. But with these facts before us we have no hesitancy in pronouncing it a case of albuminuric tonsillitis.

**BILATERAL PARALYSIS OF THE POSTERIOR CRICO-
ARYTENOID MUSCLES OF THE LARYNX,
WITH REPORT OF A CASE.***

BY ALBERT RUFUS BAKER, M.D., CLEVELAND, OHIO.

Professor of Diseases of the Eye, Ear and Throat in the Cleveland College of Physicians
and Surgeons; Oculist and Aurist to the Cleveland General,
St. Alexis and City Hospitals.

Although the literature of bilateral paralysis of the abductors of the larynx is more extensive than that of any other laryngeal neurosis, the number of cases reported are few. Indeed it is a rare disease. The case I wish to report is the only one I have ever seen. A cursory examination of the literature at my command leads me to think that not more than fifty cases have been reported. Cases must have occurred before laryngoscopic days, but were never recognized until comparatively recent times.

I was called in consultation with Dr. J. Perrier on the evening of November 7, 1895, to see Mr. D., aged forty-two years, superintendent of a large manufacturing establishment. Married; no children. Always enjoyed good health with the exception of the ataxia, and no specific history, although he has led a somewhat irregular life and during his youth had probably had sufficient opportunity to contract specific disease. Mr. D. has been under the care of Dr. Perrier for several years for posterior spinal sclerosis. Has complete absence of knee-jerk; is unable to stand with the eyes closed; obliged to walk with a cane, and has severe lightning pains in the legs; a feeling of a tight band around the abdomen, and typical Argyll-Robertson pupil; no atrophy of the optic discs. During the past year Mr. D. has suffered repeated attacks of dyspnoea, usually coming on suddenly after some unusual expiratory effort, either in sneezing, coughing, laughing, hiccough or shouting. At first the attacks were rather infrequent and were not so severe, but during the last two or three months they have been occurring almost daily, and sometimes two or three times a day.

During the attack there seemed to be no obstruction to expiration but the most violent efforts at inspiration were made, the eyes becoming fixed, the lips and face purple. Normal respiration was only restored upon his fellow-workmen placing him upon the ground, rolling him over a barrel, "walking all over him," to quote his own

*Read before the Ohio State Medical Society, at Columbus, Ohio, May 4, 1898.

words. These attempts at artificial respiration were usually successful in a few minutes, sometimes requiring half an hour, after which he would return to work as though nothing had happened. His speaking or singing voice was not affected.

A laryngoscopic examination showed the vocal cords, when at rest, to be slightly separated; it would seem scarcely enough to permit free respiration. During phonation they close normally, but during respiration did not separate widely so as to form a triangle as they do in health.

A diagnosis of paralysis of the posterior arytenocricoid muscle was made, and it was suggested that he go to the hospital and have a tracheotomy performed as soon as possible.

He was admitted to the Cleveland General Hospital on the next day, and on the morning of November 9 an attempt was made to administer a general anæsthetic, but resulted in an immediate interruption of respiration, so that the general anæsthetic was discontinued and tracheotomy performed under cocaine anæsthesia. There was no special difficulty met with in the operation, and the patient made an uninterrupted recovery, and immediately returned to his occupation, which he has followed up to the present time with scarcely the loss of a day.

He wears the tracheotomy tube constantly, with a cork in it, tied to a string. Whenever one of these suffocative attacks comes on, he pulls out the cork and normal respiration is immediately restored, he then replaces the cork and soon goes on about his work as usual. His wife tells me that these attacks occasionally come on in the night, when he pulls out the cork and replaces it without waking. The ataxia has apparently remained stationary—no better no worse.

A few weeks ago he secured a life insurance policy for \$2,000 in an industrial life insurance company. During the first year after the operation he had some difficulty in securing a satisfactory tracheotomy tube; they would break and get out of repair, and it became necessary to have a new one at short intervals, and they were also hard to keep clean, and from their irritating properties would frequently cause excessive granulations to spring up around the tube; so that we replaced the metal tube by a soft-rubber one, a sample of which I present to the Society. I am indebted to my colleague, Dr. George W. Crile, for the suggestion as to using soft-rubber tubes instead of those of hard rubber, or of metal as hitherto. I have never yet met a case in which they have given better satisfaction to the patient as well as myself, and I believe that they should come into more general use than the older style tubes which have been in use since time immemorial.

As to the pathology of these cases there has been considerable diversity of opinion, some authors maintaining that the disease was a local one probably due to an injury of the posterior cricoarytenoid muscles from swallowing fish bones, artificial teeth or other hard substances. Others have reported cases due to lesions in the course of the recurrent laryngeal nerves, such as aneurism and tumor. The more commonly accepted explanation of this exceedingly interesting and curious malady is that of a morbid condition of the nerve centers.

It is probable that a more careful post-mortem examination of tabetic patients will demonstrate that the opening of the glottis is presided over by an independent ganglionic center in the upper portion of the medulla, and degenerative changes of this center like those of the posterior columns of the cords, or the optic nerves, will be recognized as the pathologic lesion in the vast majority of these cases.

I am quite willing to concede in view of the clinical evidence already accumulated that there are other etiologic factors which must not be overlooked in these cases, such as pressure on the recurrent laryngeal nerves, hysteria and traumatism of the posterior cricoarytenoid muscles.

The Pathology of the Voice Center—ONODI—*Monatschr. f. Ohrenh.*, January, 1898.

Research has established the existence of a cortical center for phonation and furthermore that each center controls both vocal cords.

There is still considerable controversy as to the crossed paralysis of the cords due to cerebral lesions. Experimentations upon dogs have yielded interesting results. Thus, the entire brain above the corpora quadrigemina may be removed without impairment of the voice. When the brain is completely divided at the upper part of the medulla, loss of voice ensues. Onodi maintains that these results indicate the existence of a "sub-cerebral center for phonation," situated between the root of the vagus and the corpora quadrigemina. The author cites the observation that children delivered with perforation and monsters in whom the medulla is developed as far as the corpora quadrigemina, still retain the voice.

The conclusion is reached that it is impossible to localize even an approximate voice center.

GOLDSTEIN.

INTUBATION OF THE LARYNX FOR MEMBRANOUS STENOSIS.*

BY BERNARD WOLFF, M.D., ATLANTA, GA.

It is with some misgivings that I present for your consideration so trite a subject as intubation. The condition which imperatively demands prompt operative interference in this direction may fall within the practice of every physician and the life of the patient may depend upon his fitness and preparedness to meet the emergency.

Fortunately for us in the South, diphtheria is not the scourge that it is elsewhere, but it does exist and its severity undergoes no mitigation by reason of geographical considerations.

In my opinion the ability to perform the operation of intubation should be as much a part of the professional equipment as the knowledge of how to pass a catheter or apply the forceps. The difficulty of the operation is overestimated. Anyone is capable of performing it who has ordinary dexterity and some knowledge of the anatomy of the throat.

All that is required is a certain amount of practice on the cadaver or on lower animals or the closed fist, and even this is not absolutely essential, as many operators have successfully performed the operation at the first essay.

The principal drawback is the expense of an intubation outfit. It is hoped that in time it may be so reduced as to come within the reach of all and even this shred of an apology will be swept away.

It is not often that one's fame becomes permanently established upon the introduction of a single surgical method, yet the name of Joseph O'Dwyer, who has so recently passed to his eternal reward, will be cherished so long as diphtheria shall claim its victims as that of one whose genius made it possible to remove from that dark shadow so many little children.

Intubation, by which is meant the introduction of a metallic tube into the larynx through the mouth for the relief of dyspnœa from obstruction had long been foreshadowed. Catheterization of the larynx had been proposed and actually practiced before Bouchut, of Paris, in 1858, advocated the insertion of a metal tube into the larynx for the relief of stenosis. Bouchut's method never became popular and

*Paper read before the Southern Section of the American Laryngological, Rhinological and Otological Society in Atlanta, Ga., March 28, 1898.

soon fell into disuse. It remained for Joseph O'Dwyer in 1880 to quite independently elaborate his conception and to give to the world what was to him a real invention. So carefully and completely was his idea evolved and so correct the mechanical principles upon which he founded his device, that it is to-day practically the same as when first introduced. No modification has offered improvement sufficient to materially alter the original form of the tubes or to facilitate the *technique* of the operation.

The principal advantages offered by intubation over tracheotomy and those which gained for the former the speediest recognition are its simplicity, its comparative freedom from intrinsic danger and its avoidance of the open wound and subsequent close attention required by the older procedure.

Malgaigne remarked: "If I do real honor to the author of tracheotomy, what honor will he not deserve who shall come to deliver us from it."

It may be regarded as established that intubation is indicated in every instance in which dyspnoea is caused by laryngeal obstruction except when due to lodgment of a foreign body in such a manner that the introduction of a tube is mechanically impossible. Tracheotomy is here to be preferred and also where intubation has failed to produce the desired effect. This is the legitimate field of tracheotomy in which intubation has no desire to poach.

The contention between the advocates of the two methods has settled down upon the common agreement that tracheotomy shall be the handmaid of intubation.

A question of the first importance is, when shall we operate in croup? In common with many other therapeutic procedures involving mechanical interference, intubation is often deferred too long, when earlier operation would have greatly influenced the prognosis. It should by all means not be reserved as a last resource in urgent dyspnoea with cyanosis and exhaustion. It is more appropriate to employ it to prevent this condition than when it actually exists.

The character of the respiration offers the proper indication for the operation. When dyspnoea is progressive, breathing largely abdominal, increasing evidences of faulty oxygenation of the blood, intubation is demanded. Attention has been called by Bayeux to an indication for the operation furnished by the contraction of the accessory muscles of respiration. Their action consists of a rhythmic tension, persistent and synchronous with the inspirations. The muscles are engaged in this order: trapezius, omo-hyoid, scalenus anticus, sterno-cleido-mastoid. Rauchfuss, of St. Petersburg, thinks this

sign is no more to be relied upon than that observed forty years ago by Gerhardt of failure of the pulse in inspiration called inspiratory asystole and described by Variot as paradoxal pulse.

The state of the breathing furnishes a more reliable and more easily observed sign than the foregoing and is a quite sufficient guide to the proper time for operative interference.

The instruments required for intubation are six tubes gauged to the age and size of the patient, an introducer, silk thread, an O'Dwyer-Denhard gag, a guage and an extractor.

Preparations for the operation must be carried out as rapidly as possible, for unnecessary loss of time may prove disastrous.

The child is taken up and put upon the nurse's lap in a sitting posture, the head resting upon her left shoulder. A sheet or blanket is wrapped around it so as to confine the arms to the sides. The operator then selects the appropriate tube and runs a thread of stout silk eighteen inches to two feet long through the eye in the head of the tube. The obturator is then screwed firmly on to the introducer. The position of the child may then be somewhat altered by having the nurse advance her shoulder in such a way as to bring the neck on a vertical line with the body. The gag is then introduced into the left side of the mouth, the blades widely separated and held in position by an assistant who at the same time steadies the head.

It is sometimes necessary in rebellious children to use the tongue-depressor to force open the mouth. It is inserted behind the molar teeth, brought around forward and then pushed backward until the pharynx is touched and the gagging reflex aroused. The operator may take advantage of the opening of the mouth at this time to insert the gag.

Force in using this instrument is unnecessary. Injury to the teeth and gums and even fracture of the jaw has occurred from rude and unskillful use of it.

The gag being in position, the operator either sitting or standing, introduces his left index finger into the mouth, passes it backward until he feels the epiglottis. The finger should be protected from injury with adhesive plaster or bandage, leaving the tip free. The epiglottis is hooked up, exposing the rima glottidis. The tube secured to the introducer is passed along the side of the finger, keeping well in the middle line until the point impinges upon the chink of the glottis into which it is guided by the tip of the finger. The finger is then placed on the head of the tube to hold it in position and the obturator freed from the tube by pushing forward the thumb piece on the handle of the introducer, and rapidly withdrawn. The

thread is then looped around the patient's ear and the gag removed. Elaborate instructions as to manipulating the introducer are not essential and may even be reprehensible as too great attention to mechanical detail may obscure the main purpose in view, the rapid insertion of the tube into the larynx. If the tube be kept accurately in the middle line it matters little how the introducer be held, as the intromittent finger is a sufficient guide.

No more force than is absolutely necessary should be employed and as a matter of fact very little force is required, usually not more than that exerted in passing a catheter.

When it is clear that the tube is in position, the thread may be cut through, including the knot and withdrawn, first inserting the finger again to steady the tube. It is a small but useful point to remember to cut away the knot in the thread to avoid the disagreeable accident of jamming it into the eye of the tube.

The indications, of successful introduction of the tube are relief of dyspnoea, and violent, straining cough. It is important that this cough should be present, as it causes expulsion of loose membrane. If it be absent a drink of whiskey or brandy should be given to excite it.

Sometimes the cough is so violent as to forcibly eject the tube. One should be always on the alert for this accident, so that it may be immediately rectified by reinserting the tube if necessary. It occasionally happens that the cough which is forceful enough to expel the tube clears the larynx at the same time of membrane detached by the tube, and reinsertion is not immediately indicated. Insertion and moving the tube up and down in the larynx to attain this object is recommended by some French authors under the name *echonvil-lonage*.

The most frequent accident in the operation of intubation is passing the tube into the œsophagus. It is most likely to occur at the hands of inexpert operators and is evidenced by failure to produce any effect upon the breathing, and by shortening of the thread as the tube recedes. The tube may be swallowed in this way when it ultimately passes by the bowel, but the accident is readily recognized and the tube regained with the thread and another attempt at introduction may be made.

Pushing down the false membrane below the tube may occur, though rarely. Almost complete apnoea marks this mishap. The tube should be withdrawn immediately and artificial respiration employed. The membrane may have been detached sufficiently to be coughed out. A case in point has been reported in which a cast of the larynx and trachea was got rid of in this manner. Passing the

tube into the ventricles of the larynx and even through its walls into the surrounding cellular tissue may happen in the hands of bungling operators. It can be avoided by having in mind the precaution to keep the tube well in the middle line and using no unnecessary force.

Not infrequently from deforming œdema the epiglottis loses its value as a landmark. In such cases, the hard nodule—the upper border of the cricoid cartilage behind the epiglottis should be felt for and when found will furnish the necessary guide.

It is generally advisable to leave the thread attached to the tube in order to facilitate withdrawal in case of the occurrence of any of the accidents mentioned above. As the first impulse of the child when his hands are freed is to grasp the thread, the part within the mouth should be passed between two of the molar teeth and out at the angle of the mouth so that it may not be bitten in two, while the part outside of the mouth should be covered with a strip of adhesive plaster throughout its whole length upon the cheek. If the circumstances of the case admit, it is always best to remove the thread, as it is a source of annoyance to the child from irritation of the throat. Feeding after intubation is at first difficult: the epiglottis may be swollen and does not fit accurately over the head of the tube, allowing small quantities of fluid to gain access to the larynx during deglutition. The child must be laid on its back, with the head low and fluid nourishment be swallowed, so to speak, "up-hill." This method was introduced by Casselberry, of Chicago, and overcomes the difficulty to a considerable extent. After a time the larynx becomes more tolerant and food may be administered in the usual position. Semi-solid food may be given instead of fluid and is somewhat less apt to cause trouble.

How long should the tube be retained? There is and can be no rule applicable to the retention of the tube. The condition of the breathing is the only rational guide. If this be satisfactory the tube may be removed with safety. Usually three days to a week is a sufficient length of time for the tube to remain, though this is dependent entirely upon the course of the disease.

It has been shown in cases of chronic stenosis that a tube, if properly fitting, may be retained indefinitely without injury to the larynx. Pain and discomfort with repeated blackening of the lumen of the tube with membrane are counter-indications for its retention. Reinsertion may be made whenever necessary, so that tentative removal may be practiced.

Extraction is regarded as more difficult than introduction, though I cannot say that this has been my experience. It is accomplished in a reverse manner to introduction. The patient is put in position,

gagged and the left index finger introduced into the mouth and passed down to the head of the tube. The extractor is guided into the lumen of the tube and the blades opened. The tips of the blades are united and gaining a firm hold on the tube readily remove it. Prolonged attempts at extraction are to be condemned; repeated short attempts do much less harm. In cases of emergency, when the operator is not at hand, extraction of the tube may be effected as with foreign bodies. Inversion of the patient, pushing up the trachea from the suprasternal notch while the larynx is steadied may bring the tube within reach of the finger or forceps.

Prognosis.—The prognosis of intubation has been so altered by the use of antitoxin that it may now be regarded as almost favorable. It is certain that the appalling mortality of pre-antitoxin days does not now obtain, if the serum be employed early enough. I have had but two cases since the introduction of the serum treatment. Both terminated fatally, but in both the serum was administered too late to be of any avail.

The following quotation from the *American Year Book of Treatment* for 1897, shows the relation of antitoxin to the prognosis of laryngeal diphtheria: "The committee of the American Pediatric Society appointed to investigate the value of antitoxin in laryngeal diphtheria reports that 1,704 cases were collected, giving a mortality of 21 per cent. The mortality of 637 intubations was 26 per cent; of 20 tracheotomies, 45 per cent; of 11 tracheotomies, subsequent to intubation, 63 per cent; of 1,036 non-operated cases, 17 per cent.

It is emphasized, first, that before the use of antitoxin 90 per cent of laryngeal diphtheria cases required operation, whereas now with antitoxin 39.21 per cent require it; second, the percentage figures have been reversed. Formerly 27 per cent represented the recoveries, while now under antitoxin there is a mortality of 27 per cent."

In the *Virginia Medical Monthly* for September, 1891, I reported my first sixteen cases of intubation occurring in my service at the Willard Parker Hospital, New York.

Among these there were ten deaths and six recoveries, or a recovery percentage of 37.5. This was then regarded as an excellent showing. According to the statistics of the collective investigation just quoted the figures in these cases would now be reversed.

I have given nothing new in this rather desultory account of intubation and nothing that cannot be found in any work on the subject. But I feel assured that the presentation of the facts anew cannot fail to convince the hearer that the operation is a life-saving measure and is unique in its sphere of utility.

So well as I can now recall, I have never yet seen any reports of cases of intubation coming from the South. I cherish the hope that even this modest presentation of the subject may serve to arouse the spirit of investigation which may lead to a more general recognition among us of the value of intubation and a more personal knowledge of and familiarity with its technique. It is our clear duty to avail ourselves of every practical means to further the main purposes of our calling—the prevention of disease and the prolongation of human life.

A Report of Thirty-eight Consecutive Intubations for Diphtheritic Croup, with Thirty-six Recoveries; all Treated with

Antitoxin—F. E. WAXHAM—*Phil. Med. Journal*, June 18, 1898.

The author states that of thirty-eight cases operated upon five were under two years of age, with four recoveries, or 80 per cent.; eleven were two years old, with eleven recoveries, or 100 per cent.; six were three years old, with six recoveries, or 100 per cent.; seven were four years old, with six recoveries, or 85.7 per cent.; two were five years old, with two recoveries, or 100 per cent.; six were six years old, with six recoveries, or 100 per cent.; one was eight years old, with one recovery, or 100 per cent. Total, thirty-eight cases with thirty-six recoveries, or 94.7 per cent.

The good results are attributed to the use of antitoxin. Previous to the use of this agent the mortality was 35 per cent.; with antitoxin the mortality is 5.3 per cent. To be of value, antitoxin must be given early in the disease, in full dose, and repeated as often as necessary.

SCHEPPEGRELL.

Intubation and Antitoxin in Diphtheritic Croup—ALBERT B.

STRONG, A.M., M.D.—*Chicago Medical Recorder*, Sept. 1898.

The writer reviews a former article in which he gives the result of his experience in 100 intubations and 27 tracheotomies. Of the former 32 per cent., of the latter 22.2 per cent., recovered. The great frequency of the recurrence of the false membrane was especially noticed time and again. Antitoxin was not used in any of these 100 cases. Since then he has used it a number of times, and found it has undoubted power in arresting the growth of the membrane. His experience leads him to think that intubation with antitoxin has been more successful than intubation without the remedy, saving for him 50 per cent. of the cases.

STEIN. (BISHOP.)

CASE OF ABSCESS OF TEMPORO-SPHENOIDAL LOBE— OPERATION—RECOVERY—REMARKS.

BY HERBERT TILLEY, M.D., B.S. (LOND.), F.R.C.S. (ENG.)

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London.

Cases of intracranial suppuration relieved by operative interference are of such constant recurrence that I almost hesitate to insert the notes of the following case recently under my care; there are, however, one or two points in the previous history of the case as well as in its more recent progress under treatment, which may be of such interest to the general surgeon and aurist as to make it worth while placing the details on record. The history is as follows: Patient is a girl of nine years of age, and four years ago she had a discharge of pus from the left ear, which has never ceased for more than a week or ten days at a time. When six years old the discharge ceased, violent headache on the left side supervened, the patient was very ill and was sent to a hospital, where an operation was performed at the back of the ear and which relieved all her symptoms so that in three weeks' time she left the hospital apparently cured. The discharge from the meatus, however, never entirely ceased, and recently she has suffered from bad earache. About March 25 the discharge suddenly stopped, she became very ill and was sent to the hospital on the afternoon of March 30th, when I made the following notes: Patient is a thin girl, age nine years. She looks very ill and her cheeks are flushed. Both pupils very widely dilated, no optic neuritis. Temperature 98.6° ; pulse 70. Behind the left ear there is the scar of an old operation; there is no discharge from the left meatus, which is, however, considerably narrowed. She lies curled up in bed with the eyes closed, and resents any interference, but when thoroughly roused answers questions intelligently but slowly. She says her head aches "all over." A dose of castor oil was administered, followed by an enema next morning, the bowels acted twice. During the night patient was restless and gave utterance to short, plaintive cries, and on two occasions the night nurse says she became opisthotonus.

March 30.—The general condition remains the same, the condition of irritability strongly reminding one of that exhibited by a patient suffering from "lacerated brain." Pulse 54° , regular. Whilst examining the meatus a free flow of viscid, green, horribly

fetid pus escaped, much more than could be contained in the meatus and antrum alone. I therefore determined that we had to deal with a cerebral abscess discharging through the meatus. The patient was at once anæsthetised (chloroform), and during the process the pus continued to run freely from the meatus. The stench was intolerable and could only be partially overcome by saturating everything in its neighborhood with eucalyptus oil. I made a curved incision behind the left ear, including the scar of the old incision; on turning the ear forwards we came at once onto a quantity of foul granulations filling the antrum, whose outer wall was deficient (previous operation). This cavity was cleaned out by curettes and sharp spoons and found to communicate very imperfectly with the tympanum, the intervening lamina of bone not having been removed at the first operation. I need scarcely say that it was removed now and the antrum, attic and tympanic cavity thrown into one. The bony roof of the antrum was absent and composed of soft granulations through which I carefully inserted the points of a Lister's sinus forceps, on dilating these a further flow of foul pus occurred. The forceps were inserted for one and a half inches into the abscess cavity in the brain substance.

A rubber drain tube the size of a goosequill was passed into the abscess for about two inches—the upper end of the wound drawn together by two stitches, irrigated with 1 to 2,000 perchloride of mercury, lightly plugged with iodoform gauze and over all a cyanide of mercury dressing applied.

Three hours after the operation patient asked for some bread and butter.

April 1.—Patient was much brighter and took active interest in her surroundings. Pulse very irregular, strong, 78 per minute. Temperature 99°.

The dressings were removed and on slightly shifting the position of the tube, pus again flowed freely through it. By passing a Weber Liel intratympanic catheter fixed on rubber bottle through the drain tube, which it did not occlude, I was enabled to irrigate the abscess cavity with perchloride of mercury 1 to 2,000 without removing the rubber drain.

For a fortnight matters progressed rapidly and the little patient was running about the wards—the discharge was clear, very slight and free from smell, but on April 16—(more than a fortnight since the operation) she complained of some frontal headache and voluntarily went to bed. There was no fever and pulse was normal. The right pupil much larger than the left—tongue clean, bowels open.

April 17.—The patient has been whining with pain (headache)

during the night and has had no sleep. The headache is frontal. Pulse is 120 and temperature 102° , pupils dilated and cheeks very flushed. She has vomited several times without any preliminary nausea. Calomel, gr. ii, was given, after which, during the next eight hours, the bowels acted three times.

April 18.—Her condition remains the same, if anything, worse. Pulse 130, irregular; temperature 102.4° . The patient's attitude and general condition seemed to point to a possible spreading of some septic condition from the wound, inducing meningitis, and under chloroform anaesthesia the wound was thoroughly examined and a small disc of bone was removed by a one-quarter inch trephine immediately above the level of the antrum and then the piece which intervened between the trephine aperture and the pathological opening in the roof of the antrum was removed.

No pus was found either between the dura mater and the skull for an area of two inches around the opening, or in the substance of the temporo-sphenoidal lobe, which was explored in four different directions. The drainage tube was not replaced. At the end of the operation the patient was in a very weak condition.

April 19.—She has passed a good night and the pulse and temperature are normal.

A slight tendency to hernia cerebri was the only cause for anxiety in the after treatment, which ended in complete recovery, the patient leaving the hospital on May 5th.

Amongst other points of interest in the case is the fact that the antrum was only opened and not thrown into communication with the tympanum at the first operation—had this been done the ease with which the combined cavities could have been drained and effectually dressed would probably have resulted in a permanent cure. The advantages of this method are obvious, but I have recently seen the antrum merely trephined and scraped out without throwing it into conjunction with the tympanum, a procedure which I think may lead to such eventualities as here described.

I do not remember ever having seen a case of cerebral abscess which exhibited so marked a likeness to one of cerebral laceration as this case did, but the slow pulse and absence of fever with a history of ear trouble suggested the diagnosis of abscess, which was clinched by the free flow of fetid pus from the meatus.

The onset of acute symptoms during convalescence, their severity; the absence of obvious cause, the result of exploration and the traumatism which the brain tolerates with impunity seem to me points which render this case worthy of record.

101 Harley Street, W.

THE TECHNIQUE OF TYMPANIC INFLATION.*

BY EDWIN PYNCHON, M.D., CHICAGO.

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For something over a century and a half it has been known that forcing air through the Eustachian tube into the middle ear would frequently benefit an impairment of hearing. One of the earliest advocates of such practice was Valsalva, who suggested a method of auto-inflation which has ever since caused his name to be familiar to all students of medicine. The earliest approach to the Eustachian catheter was used for the injection of fluids into the Eustachian tube.

Adam Politzer, in 1862, made known to the medical world a method of great value for inflating the middle ear, which has since then been universally adopted and practiced under the name of Politzerization. He originally used a small compressed-air receiver and cut-off, but later substituted a compressible rubber hand ball of large size. Much gray matter has been expended upon consideration of the problem as to the proper size of ball and whether it had better be grasped sidewise or endwise in the hand of the operator in order to secure the most desirable results. The hand ball was later improved by the addition of a larger connecting rubber bag which, when filled with air, was to be forcibly compressed between the operator's knees, or by his elbow pressed against his side. This modification gives hint that a desire was felt for more air, or for a more continuous pressure.

The philosophy of tympanic inflation is to accomplish either one or more of the following objects:

- A. To secure ventilation of the tympanum.
- B. To remove abnormal secretions or discharges.
- C. To restore the normal air pressure in the tympanum.
- D. To correct the engorgement of vessels which is due to rarefaction.
- E. To promote the absorption of inflammatory products.
- F. To push out the abnormally retracted drum-head.
- G. To cause massage of the ossicles.

* Read before the Western Ophthalmic and Oto-Laryngologic Association, at Chicago, April 8, 1898.

While at the time of each inflation the intra-tympanic air pressure is temporarily more or less augmented, when the drum-head is intact, the ultimate result aimed at is to cause equalization of air pressure upon both sides of the drum-head. The conditions wherein tympanic inflation is indicated are various and may, in a general way, be classified as follows:

A. Conditions of acute inflammation of different degrees, ranging to otitis media acuta, wherein the exit of the middle ear is occluded through inflammatory swelling of the Eustachian tube, and the tympanum becomes filled with fluid secretions. Pain, more or less pronounced, is a prominent feature of this condition. While it is plainly apparent that in this form of trouble drainage and ventilation of the tympanum are what we principally desire, still the air douche, with intermitting impacts, as is given by Politzerization, frequently does not accomplish the result aimed at, and, if strong enough to be successful in passing through the tube, may materially augment the trouble by driving the imprisoned secretions, which may have become muco-purulent, into the antrum and mastoid cells. In any event, the sudden impact causes discomfort, and often expends its entire force upon the inflamed tube without entering the tympanum, hence the results are unsatisfactory. With such an unfavorable showing is it to be wondered at that many otologists decry such practice, and favor an early paracentesis in order to drain the tympanic cavity?

B. Chronic conditions of Eustachian tubal catarrh, whereby the proper ventilation and drainage of the tympanum are impaired, being manifested by more or less diminution of hearing, with or without accompanying subjective symptoms.

C. Chronic conditions of non-suppurative middle-ear catarrh, accompanied by more or less drum-head retraction, and an impaired ossicular mobility, varying in degree to actual sclerosis, subjective symptoms being always present.

D. Suppurative conditions of the ear, whether acute or chronic, accompanied by perforation of the membrana tympani.

Tubal catarrh and middle-ear trouble are so intimately related that one almost invariably accompanies the other. In the classification given, B covers those cases in which the tubal condition is the most prominent, and C those cases wherein it is of minor importance as compared with the middle-ear trouble.

I have long been convinced that in the use of compressed air for the purpose of producing tympanic inflation, the factor of dosage has not been given sufficient consideration. It is easily apparent

that in the use of compressed air its physical properties may be varied as follows:

1. Variations in pressure.
2. Intermitting flow with infrequent or rapid breaks.
3. Continuous flow.
4. Unmedicated air.
5. Medicated vapors or nebulæ.
6. Variations in temperature.

With such a variety of physical properties it requires no argument to prove that in application its therapy can be proportionately extended.

As these required differences of pressure and flow cannot be accurately obtained from a hand bag, its use is not recommended, except as a makeshift in bedside practice. In order to be able absolutely to control the pressure, I have designed, for office use, an auxiliary tank, as illustrated in Fig. 1, which is provided with four



Fig. 1. Auxiliary air-tank.

valves, and has a capacity of about five gallons, which gives all the volume required for any one treatment.

Beyond the auxiliary tank is another and larger tank, not shown in the cut, and containing air at a heavy pressure, of say 40 to 60 pounds. The strong pressure, from the primary tank, is secured by opening valves A and B, valves C and D being meantime closed.

As the air escapes through the cut-off the pressure is constantly registered by the meter above. By opening the valve C the auxiliary tank can be stored to any pressure required, less than the pressure of the primary tank, when the valve A is closed. If the pressure in auxiliary tank is at any time found to be too high, it can be lowered at will by opening valve D, which allows of the rapid escape of the excess pressure, the meter meantime constantly registering the pressure remaining. In this way the volume of five gallons of compressed air, at any pressure required, can at any time be commanded, and, in its use, the first impact is no stronger than is the stream following. This tank, with the fittings, was made for me by Messrs. Frank and Kratzmueller, of this city, who have also made the inflator shown in Fig. 2.

In order to medicate the escaping air, when any volatile agent is being used, an improved Butties inhaler can be employed, such as I described in a recent number of *THE LARYNGOSCOPE*.* I have just made a further improvement in this little instrument whereby its simplicity is increased and its size decreased.† The illustration, Fig. 2, shows its use with a cut-off when doing middle-ear inflation

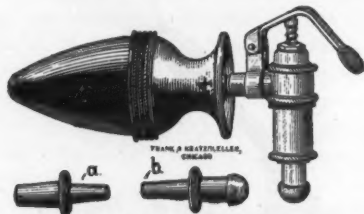


Fig. 2. Inflator-Inhaler ($\frac{3}{8}$ size.)

without a catheter, but when the catheter is to be used the small extension A is first inserted into the hole in the nasal end, and then lengthened with a very short piece of rubber tubing in order to soften the contact when pressed against the opening of the catheter after it has been properly introduced.

Prior to its use, the remedy indicated is placed upon the sponge which is inside the medicine chamber, and which is best done by dropping same through the opening in the funnel-end, thereby avoiding the trouble of unscrewing the medicine chamber. In this way the instrument, after being prepared for use with the suitable rem-

*"The Evolution of the Butties Inhaler."—*THE LARYNGOSCOPE*, April, 1897.

†"Either a Pocket Inhaler or a Middle-Ear Inflator."—*New York Medical Record*, June 11, 1898.

edy, and attached to the cut-off, as shown in Fig. 2, can be allowed to hang over the operator's knee, being supported by the tube from the air-tank, and thereby leaving both hands free for the proper adjustment of both the catheter and auscultation tube.

This instrument is made of hard rubber and serves for use with any remedy which will volatilize. The operator will find it convenient to be supplied with several of these inflaters, charged with the different medicines his practice requires, in which case they can be numbered, (see Fig. 2) and thus easily told apart. One of the set should be made of metal, which can if desired, be heated, and with which can be used chloroform or ether. One of the worst defects of the old-fashioned Buttlers instrument was the small openings, hence I have had the exit holes made of liberal size so that lack of volume will not counteract the intensity, otherwise, with even sufficiently strong pressure, success might not be attained.



Fig. 3. Nebulizer with nose-piece ($\frac{1}{3}$ size); a. Extension for use with the Eustachian catheter ($\frac{2}{3}$ size).

For oily remedies and medicines which will not volatilize, I am in the habit of using a hand nebulizer (see Fig. 3) which I have previously described.*

*"A New Nebulizing Device."—*Annals of Otol., Rhinol. and Laryngol.*, May, 1897.

In office practice I use this latter device by preference in most cases wherein Politzerization is practiced, and even at times with the catheter, though, for use with the catheter, the inflator is the most convenient to use. With less than a 20-pound pressure some remedies will not nebulize nicely, hence another reason for my using the nebulizer chiefly in cases in which high pressure is permissible but, when it is elected to use the nebulizer with the catheter, it must first be attached to the cut-off and placed upon a low table within easy reach, until the catheter and auscultation tube are properly adjusted. At my office I have attached to my treatment desk a swinging shelf which is convenient for this purpose. The ordinary nasal tip is also displaced with a reduction tip, (see a. Fig. 3) the distal end of which is guarded with a small soft rubber extension, the same as in the case of the inflator.

In all chronic non-inflammatory cases, whether suppurative or not, wherein the Eustachian tubes are sufficiently patulous to allow of inflation without the use of the catheter, I believe that Politzerization is all-sufficient. It is pre-eminently the method of preference for children, and in those cases wherein an occluded nasal passage makes difficult the introduction of a catheter. The patient, if at all intelligent, can generally tell whether or not the middle ear is reached, though in case of doubt, by use of the auscultation tube, particularly with new patients, the physician can easily determine for himself. If inflation of one ear only is desired it can generally be secured by having the patient tightly occlude the opposite external auditory canal with the finger. While many cases are thus inflated with the greatest ease, others are rebellious, and tax one's patience and ingenuity. In fact, with such cases, the catheter is often resorted to when with either a higher pressure, or by trying a variety of methods, the use of the catheter would not be found necessary. In this class of cases, wherein no active inflammatory conditions are present, I have often used as high as a 60-pound pressure, when a lesser pressure was not successful, during the employment of the following given methods. A 10-pound pressure is the lowest that has proven of service, it having been with a child.

First method. Introduce nasal tip in one nostril, closing the other; next direct the patient to close the lips *tight*, to blow out the cheeks, and swallow *hard*, at which instant, by operating the cut-off, inflation can generally be accomplished if the air pressure is not too low. If not successful, I proceed to the following:

Second method. Introduce nose-piece in one nostril, closing the other, and direct patient to open the mouth *wide*, and breathe

through same, when, by operating cut-off intermittingly, inflation can be done. This will be found to be a splendid method for children.

Third method. Introduce nasal tip in one nostril, leaving opposite nostril free; next have patient open mouth *wide*, breathing through same. Then operate cut-off and, as vapor or nebulae is escaping from free nostril, close same quickly, for a second at a time, repeating several times in a minute.

Fourth method. Introduce nose-piece in one nostril, closing the other, and direct the patient to *cough hard*, or *hawk as when clearing the throat*, and simultaneously operate the cut-off.

Through the assistance of these methods I am rarely compelled to resort to the early method of having the patient swallow water.

The intermitting current, so universally employed, (which is erroneously called an air douche, as a douche implies constancy of flow) in addition to aerating the tympanum helps to cleanse that cavity when suppurative with perforation, or else gives passive motion to, or massage of the drum-head and ossicles, when no perforation exists, and thereby tends to counteract the common tendency to retraction, the successive concussions pushing the drum-head out.

Different degrees of tubal catarrh and stoppage in chronic n. s. cases require different degrees of pressure. Some stand 60 pounds with no inconvenience, and I have no doubt but that selected cases would respond agreeably to 80, or even 100 pounds, wherein inflation with a 60-pound pressure by the Politzer method cannot be secured. I have not used higher than 60 pounds, as that has been the limit of my supply. Of course, it will be understood that the strong current is used only intermittingly by the Politzer method, and that the impacts are both brief and frequently repeated.

The sudden impact of Politzerization in catarrhal conditions of the tube, acts upon the catarrhal secretions in the tube much as wind gusts act upon the falling snow, by producing drifts; hence, after the inflation, the hearing is often temporarily worse, though the eventual result is good, as, by the drifting of the secretion it is made to move, which is the first step toward its eventual escape into the post-nasal space. In this condition the continuous air current will often be found to give far better results than does the intermitting flow, though at times, the two methods can be alternated with advantage. One of the objections made against Politzerization in acute inflammatory conditions is that the tubal secretions may be blown into the tympanum. This objection will not hold good against the constant air current as, in its use, the return flow forces

the secretions from the tube into the post-nasal space. Another objection made against inflation in such conditions is due to the danger of infecting the tympanum by causing septic matter to enter that cavity. This danger can be further minimized by having the constant current consist of an antiseptic nebulæ in place of unmedicated air.

In the more acute forms the tube may become stopped up through the hyperemia produced as a primary result of the intermitting inflations, hence, in such conditions, and progressively with the increased degree of inflammation present, the force should be reduced, and the continuous flow substituted in the place of the intermitting impacts. In acute intestinal obstruction the condition yields to an enema which gives constant pressure, while one operated intermittingly aggravates the trouble.

By a continuous flow is meant a flow without breaks for 10 or 15 seconds' time. It is used only with a catheter and 20 pounds is generally the maximum pressure required, though, at the earlier treatments, a beginning should be made with a lower pressure of, say, 8 to 10 pounds. Before using the continuous current first intermit briefly, with the auscultation tube in use, so as to be sure that the catheter is properly engaging the opening of the Eustachian canal, and thereby avoid producing emphysema.

The continuous flow is indicated in conditions of tubal catarrh wherein the hearing is temporarily made worse by Politzerization, and in inflammatory conditions of the tube wherein Politzerization causes pain when the weakest air pressure is employed which is strong enough to do inflation.

For purposes of diagnosis the catheter is indispensable, though for after-treatments its use can be largely dispensed with in chronic cases, by following the Politzer method with the modifications already noted. With the occluded tube, or when the continuous flow is indicated, the catheter must be employed, and, in order to be of the greatest value, should have combined in it the properties of small size with large bore, so as to, on the one hand, be easily introduced, and, on the other, allow of the free passage of the air current. This combination is best obtained in the silver catheter.

Conclusions:

Tympanic inflation is indicated in all catarrhal conditions of the tube, with stoppage of same, whereby the ventilation and drainage of the middle-ear is impaired.

Politzerization is the preferable method:

A. In non-inflammatory conditions wherein the tube is sufficiently patent.

B. In the treatment of children.

C. When nasal deformities render the use of the catheter difficult.

The catheter is required:

A. When Politzerization is not successfully accomplished.

B. For purpose of diagnosis.

C. When important that only one ear shall be inflated.

D. When using the continuous air current.

The continuous air current is preferable:

A. When tubal catarrh is pronounced.

B. When Politzerization produces discomfort.

C. In acute inflammatory conditions.

The intermitting air current is of particular value as a means of causing passive motion whenever there is a diminished ossicular mobility, and should be as strong and rapid as can be comfortably borne by the patient.

Columbus Memorial Building.

A Neglected Case of Extensive Double Suppurative Mastoiditis, with Complications—F. A. LONG—*Western Med. Rev.*, Vol. iii, No. 9, Sept. 15, 1898.

A seven-year-old girl, of good family history, had severe scarlet fever, and purulent otitis media developed later in both ears, and when first seen had existed four months. A large area below, behind, above and in front of both ears was infiltrated and there were irregular sinuses discharging freely, the canals being filled with granulation tissue. During the operations for relief part of the bony canal, the entire mastoid and the greater portion of the petrous portion of both temporal bones came away. Recovery with total deafness resulted.

EATON.

NEW INSTRUMENTS.

AN IMPROVED TUBE FOR DRAINAGE OF THE MAXILLARY SINUS.

J. C. MULHALL, M.D., ST. LOUIS.

Several years ago I became dissatisfied with the slow progress of, and sometimes utter failure to cure simple chronic empyema of the maxillary sinus by means of the Ashley-Cooper operation, namely, opening the sinus through the alveolus and the insertion of a tube through which to cleanse, drain and medicate.

The most common cause of failure I found to be the closure of the antral end of the tube by means of unhealthy granulations. This I found to be due to two causes, namely, the small diameter of the tube—that, for instance, figured in Bosworth's book being but $\frac{1}{8}$ of an



Fig. 1. The Tube in Situ.

inch in diameter, and the fact that the antral end was cut through at right angles, thus furnishing a sharp edge, which irritated the mucous membrane and produced granulations.

This fault, as will be seen by referring to figure 2, is obviated by beveling off the antral end.

The second improvement consists in the large diameter of the tube, $\frac{1}{4}$ of an inch, permitting the beveling process and allowing a much larger stream of cleansing fluid to enter and affording more room for the third improvement, a movable lid attached to the oral end of the tube, figures 3 and 4, the great advantage of which must be at once apparent, permitting no foreign body to enter the antrum, and if the tube be filled with sterilized cotton or medicated gauze, which the construction of the tube easily permits, absolutely preventing infection from the mouth.

This tube I exhibited at the meeting in May, 1898, of the American Laryngological Association, and in September of the same year a patient with the tube *in situ* at a meeting of the St. Louis Medical Society.

This patient had suffered for five years, before he came under my care, with a foul empyema of the right maxillary sinus, which had been treated through the ordinary tube, and yet after treatment carried on through my tube, an apparent cure had been accomplished in three weeks. It is now six weeks since any trace of pus has been evident in this case. As will be seen by reference to figures 1, 3 and 4, the tube is retained in place by means of a band fastened to the adjacent tooth.



Fig. 2.



Fig. 3.



Fig. 4.

Fig. 2.—Showing the beveling of antral end.

Fig. 3.—Showing the lid partially open and the band for attachment to adjacent tooth.

Fig. 4.—Showing the lid entirely open and the band.

For the fitting of these tubes, as well as their construction, I am indebted to the skill of Dr. J. W. Wick, D.D.S., Columbia building, St. Louis.

In the *Monatsschrift für Ohrenheilkunde*, Berlin, January, 1898, appears an article, "Die Behandlung des Empyems des Oberkiefers," by Dr. W. Posthumus Meyjes, in which there is illustrated a tube bearing much similarity to mine, hence the affidavit which ends my article.

ST. LOUIS, October 14, 1898.

I, the undersigned, J. W. Wick, D.D.S., hereby certify that at least seven (7) years ago I made for Dr. J. C. Mulhall a tube for draining the maxillary sinus, at the lower end of which tube was a lid working on a hinge, with provisions for attaching said tube to a tooth, the end of which tube penetrated the antrum, having a beveled edge.

J. W. WICK, D.D.S.

Subscribed and sworn to before me, the undersigned, a Notary Public with and for the City of St. Louis and State of Missouri, this the 14th day of October, 1898.

My commission expires January 30, 1902.

[SEAL.]

C. H. McMILLAN,
Notary Public.

HOT STERILIZED COMPRESSED AIR—AN ELECTRICAL APPARATUS FOR HEATING AND STERILIZING COMPRESSED AIR.

BY CHARLES L. ENSLEE, M.D., CHICAGO, ILL.

Surgeon to the Illinois Charitable Eye and Ear Infirmary; Professor of Otology, Rhinology and Laryngology in the Chicago Eye, Ear, Nose and Throat College.

All physicians are familiar with compressed air, also the uses to which it is adapted. They also know that cold, or draft, to the upper air passages does harm; the delicate mucous membrane is easily chilled; the sensitive parts become swollen and congested, resulting

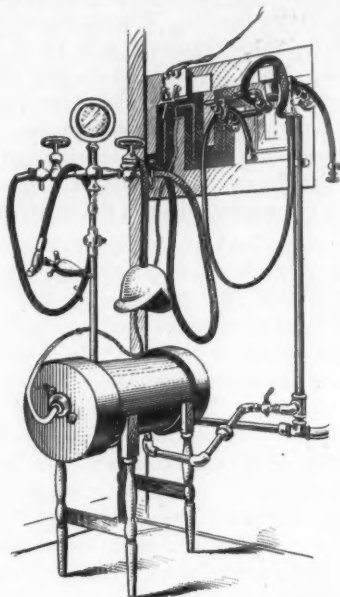


Figure 1.

in inflammation. The applications of cold medicated solutions do very little good; in many cases they are harmful. The effect of moderate heat is always soothing and healing. The principal use

for which the apparatus (Fig. 1) was designed lies in the treatment of otitis media chronica. After many experiments with cold inflations in all forms, and no satisfactory results, I conceived the idea of inventing something by which hot air, in place of cold, could be conveyed to the tympanum.

Heat stimulates the vessels, restores normal circulation, promotes absorption of medicated oils, making them more effective, relaxes the ossicular ligaments and muscular fibers of the membrana tympani; thereby restoring them more nearly to their normal condition. It also sterilizes the air and destroys microorganisms.

Tinnitus aurium is always increased by cold. Heat softens bands of adhesions, and any ankylosis that may exist, so that hot air forced through the Eustachian canal into the middle ear gradually restores the elasticity and removes the pressure from the fenestra ovalis which frequently causes the tinnitus. I have treated over five hundred cases with gratifying results. The air can be heated to any desired degree, and the force regulated with Dr. S. S. Bishop's air meter or regulator. From the receiver the hot, sterilized air is filtered and conveyed through a rubber tube to the patient. It is designed to take the place of cold air, so long in use. The apparatus can be used in connection with any oil vaporizer in the treatment of catarrh and bronchial diseases. I am confident of wonderful results from this new form of compressed air in the treatment of pulmonary phthisis.

70 State Street.

CORRESPONDENCE.

PHILADELPHIA, Sept. 20th, 1898.

To the Editors of the Laryngoscope:

There appeared in the September number of THE LARYNGOSCOPE a letter from Dr. E. B. Gleason, ostensibly called forth by some recent remarks made in the section of Rhinology and Laryngology of the New York Academy of Medicine in regard to a certain method of correcting deviation of the septum. As that letter makes some statements which, to say the least, are incorrect and are calculated to confuse the matter, I feel compelled to say something on the subject.

In the first place, I wish to make clear that I never have claimed, and do not wish to claim, Dr. Gleason's operation, as a whole, as mine. He is entitled to any credit he may get for those modifications in which it differs from mine, such as extending ends of the incision upward in the shape of a V, and which may make it superior or inferior to mine, according to individual opinion. I claim, however, that Gleason's operation rests on the essential feature which was devised and first described by myself; that is, making the lower part of the upper fragment hook onto the opposite side of the base of the septum, in order to give it a base of support and prevent recurrence of the deviation. Also a point, often important, in accomplishing this, the making of a beveled incision—which is also done by Gleason's saw-cut.

In stating that my operation resembles that of Dr. Asch, Gleason shows either a total ignorance of the latter or intentionally makes a false statement, as the two operations are as unlike one-another as two septum operations can well be.

In the statement that I use a pin to overcome the resiliency of the cartilage, Dr. Gleason has confused a description of a different operation, which occurs in the earlier part of the article in which I described the operation now under consideration. In the operation that we are now considering, no pin or other support is usually necessary, which is one of the points of the operation, as the base holds the upper part in place. The pin is used by me when, there

being also a marked vertical line of deviation, which is "cut out" by removing a wedge of cartilage, which includes the thickened angle and reaches to the opposite side (this procedure is Ingal's method,) to hold the anterior piece of cartilage in line until healing takes place.

In February or March, 1896, my operation was definitely brought to the notice of Dr. Gleason at a meeting of the section of Otology and Laryngology of the College of Physicians of Philadelphia, although I had been teaching it to my class and assistants at the Polyclinic for at least a year previous. In May, 1896, I again described the operation before the American Laryngological Association, there being present eminent laryngologists from all over the country, but in the lengthy discussion of the subject no one claimed to have done or to have read of this operation. The paper was published October 3d, 1896.

Dr. Gleason first described his operation at the section of Otology and Laryngology of the College of Physicians, October 7th, 1896. In the discussion all, who were familiar with my operation, gave it as their opinion that in its essential features it was the same as mine. Before Dr. Gleason published his paper (it was already in type) I called his attention to these facts, which he acknowledged, and proposed to add a note to his paper, giving me the proper credit. The following is the note which he published with his paper in THE LARYNGOSCOPE, and which I accepted as sufficient for the time, although not the entire truth:

"After the above was in type, the attention of the writer was called to a paper by Dr. Arthur W. Watson, of Philadelphia, published in the *New York Medical Journal*, October 3, 1896, in which is described a similar operation for deviation of the septum.

"Watson makes a beveled incision along the crest of horizontal deviations with a knife, cuts out any vertical deviation that may be present, and then presses over toward the wider nasal chamber the upper portion of the septum, until its edge is hooked over the part of the septum below the cut and retained in position, thus using up any vertical redundancy of the septum. To Watson must be ascribed priority in the practical application of the idea of pushing the upper portion of the cut septum over the lower, and thus allowing, at least in a vertical direction, for the redundancy of the septum, which has been the great cause of failure in operations previously devised."

In subsequent papers Dr. Gleason has entirely ignored the foregoing.

I give below the diagrams which accompanied my paper and Dr. Gleason's first paper, as they will show at a glance the point of resemblance between these operations:

Diagrams accompanying Dr. Watson's paper; read May 14th and published October 3d, 1896.

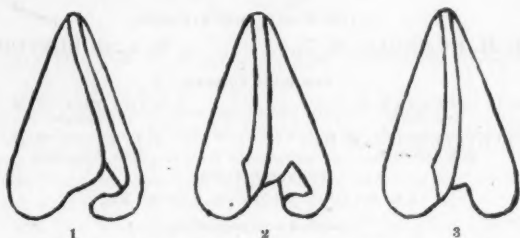


Diagram showing. 1. Deviated septum with line of incision. 2. Septum replaced, with spur standing. 3. Projecting spur removed.

Diagrams accompanying Dr. Gleason's paper; read October 7th, published November, 1896.



FIGURE 2.

Vertical, transverse section through the anterior part of the nose; angular deviation of the septum without hypertrophy of the tissues at the angle of the deviation. The dotted line indicates the direction of the saw-cut for forming the tongue-shaped flap covering the button hole in the septum. AB and DC, portions of the septum to be denuded.

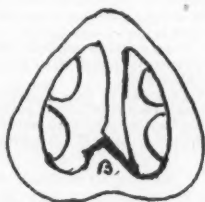


FIGURE 3.

Vertical, transverse section through the anterior portion of the nose, showing position of the septum after the tongue-shaped flap has been thrust through the button hole in the septum. After healing has occurred, the parts at B are sometimes abnormally thick; but redundant tissue can readily be removed with the saw.

I have endeavored to state these facts as clearly as possible in order that my position may be thoroughly understood, as I do not intend to continue the discussion further.

Yours truly,

ARTHUR W. WATSON.

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EDITORIAL.

ANNOUNCEMENT.

February 10th and 11th are the dates selected for the fourth annual
meeting of the Western Ophthalmologic and Oto-Laryngologic
Association. The committee of arrangements has been very con-
siderate in fixing these dates, as it will allow the members attending
the convention an excellent opportunity to participate in the enjoy-
ments of the Mardi Gras festivities. Thus the dates of the meeting
have been selected just prior to the festival period, and the members
of the active Western Ophthalmologic and Oto-Laryngologic Associa-
tion will be able to combine business with pleasure.

Applications for membership to this society will be received by
THE LARYNGOSCOPE.

ABSTRACTS AND BIBLIOGRAPHY.

I. NOSE.

Nasal Catarrh—ED. PUNCTION—*Georgia Journal of Med. et Surgery*, September, 1898.

The author arrives at the following conclusions:

1. That impairment of ventilation and drainage of the nasal fossæ are the most important elements in this affection.
2. That the touching of opposing surfaces is one of the most important pathological factors.
3. That the line of treatment is largely surgical and the chief object aimed at is to cause the defective nose to conform as nearly as possible to the shape of the ideal standard.

LEDERMAN.

Antiseptic Treatment of Nasal Catarrh—R. C. COTTINGHAM—*Alkaloidal Clinic*, June, 1898.

The author assumes that all cases of catarrh are produced by some vegetable parasite, and that the mucous membrane has been inflamed and is diseased by catarrhal bacteria.

Great stress is laid on cleanliness and disinfection. He has devised an improved nasal irrigator, in which he uses an alkaline antiseptic solution. The solution is made from tablets containing sodium borate, acid boracic, sodium chloride, aa. gr. v; oil of eucalyptus, m. $\frac{1}{25}$; oil of gaultheria, m. $\frac{1}{20}$; thymol, gr. $\frac{1}{20}$; oil of tar, m. $\frac{1}{2}$. Dissolve in three or four ounces of water. Use as often as required, lengthening the time as the case improves.

After cleansing he prescribes an ointment of white petroleum, acid tannic, acid salicylic, oil of eucalyptus and oil of gaultheria.

He directs the patient to use a portion, the size of a pea, in each nostril. Glacial acetic acid is used to reduce hypertrophies.

Five cases, including the different varieties of catarrh, are cited to illustrate the treatment.

Out of 2,000 cases treated, a cure is claimed in over 98 per cent.

ANDREWS. (BISHOP.)

A Case of Caseous Coryza—LACONNET—*Revue Hebdomadaire de Laryng., d'Otol. et de Rhin.*, May 14, 1898.

This case was found to be caused by bilateral maxillary sinusitis. The author believes the caseous formation to be due to the evaporation of the liquid portion of the fetid discharge.

SCHEPPEGRELL.

Rare Fracture of the Nose; Necrosis and Elimination of the Inferior Turbinal—GARREL—*Ann. des Mal de l'Or., etc.*, June, 1898.

A child of four years had received, two years previous, a blow on the left side of the nose. There was severe pain, but little epistaxis or swelling after the accident.

Some months afterwards there developed a purulent fetid discharge, which was treated as a common cold. The mother then perceived in the right nostril a kind of foreign body, which a physician extracted with forceps, and which proved to be the necrosed inferior turbinal almost entire. The discharge and ozena disappeared at once.

[This is certainly a remarkable case if due to traumatism. Perhaps, however, the injury was simply a coincidence and the real cause hereditary syphilis.—W. S.]

SCHEPPEGRELL.

Treatment of Chronic Naso-pharyngitis—L. S. SOMMERS—*Memphis Lancet*, July, 1898.

A review of the usual form of treatment.

SCHEPPEGRELL.

A Form of External Rhinitis due to the Klebs-Loeffler Bacillus appearing in Children Convalescent from Scarlet Fever¹—C. TODD—*Lancet*, May 28, 1898.

(The author applies the term "external" to what is more generally known as "anterior" or "vestibular" rhinitis.—*Ed.*)

Children in hospital during their convalescence from scarlet fever are peculiarly liable to a certain form of external rhinitis.

Clinical History.—The first sign of anything abnormal is a slight redness of the posterior margin of one or both nostrils, usually beginning at the inner or outer angle and at the muco-cutaneous junction. The redness becomes more intense, and ultimately a moist granular-looking raw surface results; this surface bleeds easily, and is often covered by a crust which may almost, or completely, block up the nostrils. This is more commonly the case in younger children who scratch their nostrils and so cause bleeding. There is never any formation of membrane and the process does not appear to extend backwards into the nasal cavity, but in many cases it spreads down to the upper lip in the form of an eczematous area, apparently caused by the infective discharge. This discharge is usually slight and not uncommonly absent. The nostrils remain in this granular condition for a variable time—from one to four or five weeks—and then gradually resume their normal condition. During the course

¹ This paper formed part of a Thesis for the M.D. Degree, read at Cambridge in January, 1898.

of this rhinitis there is a tendency to the formation of pustules on parts of the body exposed to contact with the discharge. In many cases the face has a "spotty" appearance, due to the presence of several minute pustules, and at times larger pustules are seen, more especially on the hands, and apparently originating in some scratch or other slight lesion or at the edges of the nails. The rhinitis does not appear to have any effect upon the general health, and is unaccompanied by any rise of temperature. There is no albuminuria or marked glandular swelling coincident with the rhinitis; but as the children are convalescent from scarlet fever the submaxillary glands in many cases are enlarged, and it is difficult to say how much may be due to the rhinitis. In no case have any paralytic symptoms been observed in the fifty-one cases recorded, though these have been carefully looked for. This form of rhinitis appears to be contagious, and spreads, though not rapidly, among young children when introduced into a convalescent ward where the children are playing together and so coming into close contact.

Children are most commonly affected about the age of three or four. No case occurred after the age of twelve years. Fifty-one cases occurred amongst 365 children affected with scarlatina—almost 15 per cent; it is, therefore, not a rare occurrence. The bacillus isolated was found to be morphologically indistinguishable from the Klebs-Loeffler bacillus of diphtheria. The cultures were virulent for guinea-pigs. The children affected with rhinitis had not been exposed to any extent to infection from cases of diphtheria while in hospital. On the other hand, although there occurred fifty-one cases of rhinitis, accompanied by a bacillus indistinguishable from the true diphtheria bacillus, only one case of diphtheria occurred.

Recapitulation and Remarks.—(1) Children convalescent from scarlet fever in hospital are very liable to a certain form of external rhinitis, often accompanied by the formation of secondary pustules on various parts of the body. (2) This rhinitis, though not membranous, is associated with the presence of the Klebs-Loeffler bacillus in the nostrils, this organism being absent from the fauces. (3) It is contagious as such, but has not been observed to give rise to faucial or laryngeal diphtheria. (4) It is unaccompanied by rise of temperature, albuminuria or marked glandular enlargement. (5) It appears to be limited to children under thirteen years of age, and has been most frequently observed at the ages of three and four years. The fact that the bacillus, though present in the nostrils in large numbers and causing a local lesion, does not give rise to any constitutional symptoms, or to faucial or laryngeal diphtheria, sug-

gests that its virulence is modified to a remarkable extent. It is virulent to guinea-pigs, when inoculated subcutaneously; but this is no criterion of its virulence to the human being, as was shown by Dr. Klein in the case of diphtheria bacilli taken from the fauces of patients suffering from diphtheria. Why the bacillus limits itself to the nostrils and does not invade the tonsils is very hard to see, as the tonsils must be liable to repeated infection, both from the nasal passages direct and through the mouth. It appears not improbable that, under certain conditions, this feebly virulent bacillus may acquire a higher degree of virulence; and this point possesses a peculiar interest in view of the large number of cases of diphtheria met with after scarlet fever.

Remarks by Prof. Kanthack.—As Dr. Todd read the above paper during an Act for the M.D. Degree, I allow myself the privilege of adding a few critical remarks which, in substance, were offered at the time, and which are intended to fill some gaps in a valuable piece of work. It is important in connection with Dr. Todd's paper to allude to the observations of Dr. Cautley,² who examined the nasal secretion of persons suffering from acute febrile nasal and naso-pharyngeal catarrh and found the bacillus coryzæ segmentosus, an organism which, morphologically and on artificial cultivation, is certainly allied to the diphtheria bacillus. Unfortunately, Dr. Cautley did not perform animal experiments or attempt any chemical tests. Certainly his organism was not a "Hofman's bacillus," nor was it a typical diphtheria bacillus. Next, mention must be made of the numerous cases of fibrinous rhinitis in which diphtheria bacilli, or organisms indistinguishable from diphtheria bacilli, have been found. It must suffice to allude to the published works of Abbott,³ Freeman,⁴ Czernetschka,⁵ Concetti,⁶ Stamm,⁷ Meyer,⁸ Gerber and Podack,⁹ and Pluder.¹⁰ Rhinitis fibrinosa is a chronic affection, which, as a rule, remains local, and does not give rise to a clinically recognized diphtheria; but the bacillus occurring in this lesion is now generally acknowledged to be the Klebs-Loeffler bacillus. Further, bacilli resembling diphtheria bacilli, but not Hofman's bacilli, are found with

² Further Report by Dr. Cautley on the Etiology of Influenza Cold. Twenty-fourth Annual Report of the Local Government Board, 1894-95. Supplement containing the Report of the Medical Officer for 1894-95, p. 455.

³ *Med. News*, May 13, 1893.

⁴ *Med. Rec.*, New York, Vol. i, p. 618.

⁵ *Prager Med. Woch.*, 1894, Nos. 38 and 39.

⁶ *Arch. Ital. di Laring.*, xii, 1892, fasc. 2.

⁷ *Arch. fuer Kinderheilk.*, 1892, Band xiv, p. 157.

⁸ *Archiv fuer Laryng. und Rhinol.*, 1896, Band iv, 1896, p. 249.

⁹ *Deutsches Archiv fuer Klin. Med.*, 1895, No. 54, p. 262.

¹⁰ *Deutsche Med. Woch.*, 1896, Nos. 44 and 46.

great frequency in many forms of ulceration of the skin, gangrene, stomatitis, cancrum oris and noma. Together with Mr. J. W. W. Stephens, I have examined systematically a number of such cases, and have separated in all cases of cancrum oris and noma an organism so closely resembling Loeffler's bacillus that, although in most cases it was not virulent, I have not hesitated to place it provisionally with the diphtheria bacillus. Recently Freymuth and Petruschky¹¹ have reported that, in cases of noma, they have obtained the diphtheria bacillus. I hope soon to find the necessary leisure to publish my own researches, but wish here to point out that, in many forms of chronic and impetiginous ulceration of the skin, it is easy to find bacilli resembling the diphtheria bacillus in all respects excepting virulence—so closely that I see no reason to separate them as pseudo forms, all the more since they all differ strikingly from Hofman's bacillus, and since competent observers now begin to recognize that acid formation, metachromatism, Neisser's staining reaction, appearances on gelatine and agar-agar and virulence, are no more certain criteria for the diphtheria bacillus than appearances on gelatine, indol reaction, and virulence are certain criteria for the cholera vibrio. I have maintained for some time that bacilli actually, and not merely distantly, resembling the diphtheria bacillus, are found frequently in the throat and elsewhere in chronic ulceration, impetigo, cancrum oris, etc., and that in many cases, by continued growth, these bacilli may be so altered as to resemble the diphtheria bacillus still more closely, and even to acquire pathogenic properties. The diphtheria bacillus is, in my opinion, widely distributed—frequently in modified forms, it is true—but still in such forms which, except by artificial and imaginary criteria, such as would not be recognized in the case of other microorganisms, cannot be separated from the Klebs-Loeffler bacillus, which, even under the best conditions, is a highly polymorphic organism. I, therefore, consider the work of Dr. Todd of all the greater importance, since it is a further contribution to the view, which is gradually gaining ground, that the diphtheria bacillus is found in many lesions which are not "diphtheria,"¹² and that the various tests, generally enumerated, do not suffice to distinguish the various modifications from the "text-book variety" of the Klebs-Loeffler bacillus. It is unnecessary to draw attention to the bearing which such a view has upon the etiology and pathology of diphtheria.—

STCLAIR THOMSON.

¹¹ Ibid, 1898, p. 232.

¹² See also Schutz: *Berliner Klin. Woch.*, 1898, p. 297, etc.

II. MOUTH AND NASO-PHARYNX.

Cysts and Pseudo Cysts of the Nasal Fossæ—BRINDELL—*Revue Hebdomadaire de Laryng., etc.*, May, 1898.

The author applies the term "cyst" to all tumors having a closed cavity containing solid, liquid or gaseous contents, the cyst having a wall, which is absent in the pseudo cyst. Although they are benign, radical removal is required, puncture and modifying injections alone being insufficient.

SCHEPPEGRELL.

Voluminous Polypus of the Size of a Nut in the Nasal Fossæ—

DESCHAMPS—*Revue Int. de Laryng., etc.*, June, 1898.

The polypus completely filled the naso-pharynx with prolongations into the right nostril. It was removed with the snare.

SCHEPPEGRELL.

When and How to Remove Tonsils and Adenoids Accompanying Acute Otitis Media—HESSLER, Halle—*Monatschr. f. Ohrenh.*, February, 1898.

The author advocates operation immediately after the acute symptoms have reached their climax, and while the inflammatory condition still exists in the ear.

In mucous catarrh of the middle ear he waits until the inflammatory reaction and exudation has subsided, when the bulging of the membrana tympani has diminished and when the crackling sounds have moderated. In muco-purulent catarrh he proceeds more slowly. In pure acute and sub-acute suppurative otitis, he performs free paracentesis to admit of free drainage, and when the otorrhea and hyperæmia have diminished, he proceeds with the removal of tonsils and adenoids.

The early operation of the tonsils is urged as a means of curtailing the aural trouble.

Hessler operates on adenoids and tonsils without an anæsthetic, using a modification of Schütz's pharynx tonsillotome.

GOLDSTEIN.

Phlegmonous Inflammation of the Lingual Tonsil—GROUZILLAC—*Revue Int. de Rhin., etc.*, June, 1898.

A patient of seventy-seven years presented violent symptoms. A free incision was made, which liberated considerable pus and was followed by a slow amelioration of the symptoms.

SCHEPPEGRELL.

Ulcerative Membranous Angina due to a Fusiform Bacillus and Spirilli—LEMOINE—*Revue Hebdomadaire de Laryng., d' Otol. et de Rhin.*, May 28, 1898.

Five cases are described in which ulceration developed under the false membrane. The fusiform bacillus and spirilli were found in the sanious exudate. Three of the five cases took a chronic course, one case requiring sixty-six days for recovery.

SCHEPPEGRELL.

Chancre of the Tonsil—A. E. BRADLEY—*National Medical Review*, June, 1898.

When first seen the tonsil was red, swollen, indurated and covered with a granular deposit, not unlike diphtheritic membrane.

The diagnosis was not positive until the secondary symptoms appeared. The disease ran the usual course and received routine treatment. The woman, who had become pregnant between the time of infection and the appearance of the chancre, was delivered at full term of a syphilitic child, which lived but a few days.

The source of infection was believed to be the kiss of a woman suffering from syphilis.

ANDREWS. (BISHOP.)

Extirpation of Soft Palate and Tonsil for Carcinoma—E. H. LEE—*The Times and Register*, Sept. 10, 1898.

The disease had existed nine months. No cause could be found except smoking. Dysphagia was the principal subjective symptom. The tumor involved the whole soft palate and left tonsil and was an inch in diameter. The submaxillary gland was enlarged. Microscopical examination established the diagnosis.

The first step in the operation was the ligation of the external carotid artery. Tracheotomy (inferior) was then performed, and the larynx packed with gauze. Temporary resection of the symphysis of the inferior maxillary bone, and drawing the tongue into the space to give the operator ample room for work was the next step. After removal the edges of the wound were sutured to the mucous membrane of the hard palate. Six months later no sign of a return of the tumor was seen.

LEDERMAN.

Mouth-Breathing in Children, Particularly as a Result of Adenoids—ARTHUR G. HOBBS—*Atlanta Med. and Surg. Jour.*, June, 1898.

A complete extirpation of the adenoids is desirable, though not necessary. The remaining part of the growth atrophies when the greater part has been removed and nasal breathing has been established. Constitutional treatment is essential in many cases after the adenoids have been removed.

SCHEPPEGRELL.

The Mouth In Glass-Blowers—LIARAS—*Revue Int. de Rhin.*, etc., June, 1898.

An interesting account of the effects of the violent breathing efforts made by glass-blowers. These effects seem to disappear spontaneously when the subjects change their occupation.

SCHEPPEGRELL.

Mycosis Pharyngis Leptothricia—MAX TOEPLITZ—*New York Med. Journ.*, June 25, 1898.

Three cases are reported. Curettement and the application of the electro-cautery are recommended in the treatment.

SCHEPPEGRELL.

The Value of the Buccal Eruption of Measles (Koplik) for Early Diagnosis—E. LIBMAN—*Phil. Med. Journal*, June 18, 1898.

The author has found the buccal eruption of measles, as described by Koplik, in each of fifty cases. Some of these were particularly interesting, because the eruption appeared some time before the typical rash, and made it possible to isolate the cases before the rash appeared; thus after a case had been admitted to the children's ward accidentally, the other children were systematically examined every day, and in ten cases the buccal eruption was found from one to two days before the rash appeared, and no case developed without presenting it.

SCHEPPEGRELL.

Elephantiasis of the Tongue—MARCHAL—*The Med. Bulletin*, September, 1898.

This rather peculiar disease was observed in a female child, thirteen months old. The tongue protruded from the mouth, and gave the face a very repulsive appearance. Saliva flowed freely from the open mouth. Nourishment was taken with difficulty. The surface of the tongue was rough and studded with hypertrophied papillae. Turgid, varicose veins were seen on the lower surface. Feeding was accomplished with a spoon. A considerable abdominal hernia was also present.

The author performed a conoid amputation, diminishing the size of the tongue one-half. Several weeks later the child could close the mouth. Her intelligence has rapidly developed and other functions in a normal manner. Microscopical examination revealed a true elephantiasis.

LEDERMAN.

A Case of Chronic Abscess of the Tongue—By C. W. RICHARDSON, Washington, D. C.—*Jour. Am. Med. Assoc.*, Feb. 26, 1898.

The patient, a woman of 18 years, of a tubercular family on the father's side, had a painless swelling on the dorsum of the tongue since early childhood, causing no inconvenience. Was suddenly taken with pain in throat and ear, with slight rise of temperature. Inspection of parts was negative. Incision in swelling on the tongue gave exit to several drachms of offensive pus and immediate relief to patient.

STEIN. (BISHOP.)

Diagnosis and Cure of a Lingual Tumor by Intramuscular Injections of Calomel—P. D. CRISTINI—*Gazette Medica Lombarda*, May 23, 1898.

The author records the case of a woman of fifty-four, who came to the Civil Hospital of Bergamo with a lingual tumor, which was diagnosed as cancer. There was a family history of cancer on the mother's side, and a brother had a tumor removed. The patient's tumor was about the size of a nut, hard, ulcerated at one

point, and slightly painful to the touch. She was kept under observation, and a grain and a half of calomel was injected intramuscularly after the method of Scarenzio. In three days there was notable amelioration of the symptoms and total dispersion in five days.

SCHEPPEGRELL.

Diagnostic Characteristics of Headaches According to Their Origin, with Special Reference to Headaches Dependent Upon Affections of the Senses—HENRY GRADLE—*Phil. Med. Journal*, June 25, 1898.

After a description of the various affections of the eye, which may bear etiologic relationship to headaches, the author states that headache may be due to suppurative inflammation of the sinuses or nasal stenosis, and that inflammatory conditions of the pharyngeal tonsil may also be a source of continuous headache in both adults and children. The teeth should also be carefully examined.

SCHEPPEGRELL.

III. ACCESSORY SINUSES.

A Simple Method of Plugging, and Simultaneously Securing an Artificial Opening in the Maxillary Antrum—HERZFELD, Berlin—*Monatschr. f. Ohrenh.*, January, 1898.

The author recommends a plug of pure rubber to be inserted after puncture or drill opening into the antrum of Highmore.

The plugs are of solid, pure gum rubber, somewhat conical in shape; to the base of the cone a flange of thin sheet rubber is attached, which prevents the plug from slipping into the antral cavity and by which it can be adapted and fastened to the adjoining teeth. The plugs are made in sizes ranging from two to eight millimeters in diameter to correspond with the size of the opening made. They are introduced immediately after operation, and with little practice can be removed and reintroduced by the patient. A similar plug is used for the opening from the canine fossa, and the part between the cheek and the gum is hollow.

The author claims for this simple apparatus that it is tolerated by the patient with greater comfort than those of metal or vulcanite, is easily handled by the patient, simple in construction and inexpensive.

GOLDSTEIN.

A Case of Periostitis of the Floor of the Orbit Due to Right Acute Maxillary Sinusitis—DESCHAMPS—*Revue Int. de Rhin., etc.*, June, 1898.

The severe orbital symptoms from which the patient suffered disappeared on opening and draining the maxillary sinus.

SCHEPPEGRELL.

The Treatment of Empyema of the Maxillary Antrum—W. P.MEYJES, Amsterdam—*Monatschr. f. Ohrenh.*, January, 1898.

The author describes a tube, constructed of gold, or of gold-plated silver, inserted for permanent drainage and irrigation of the antrum of Highmore after operative puncture or drill.

This tube is constructed with a flange, fixed at a right angle to its lower end, to prevent it from slipping into the cavity. A silk ligature is passed through small eyelets in the flange and fastened to the adjoining tooth to hold the tube in place.

To the under surface of the flange is fitted a hinged lid, clapping with a small spring tightly over the tube. The inner surface of the tube carries a small round button of the same diameter as the lumen of the tube, and when the lid is in place the button fits as a plug in the tube, holding the lid firmly in place. The lid is leaf-shaped, projecting slightly beyond the edge of the flange so that it may be easily opened by the patient with the finger nail.

An angular irrigating canula completes the apparatus.

GOLDSTEIN.

The Treatment of Empyema of the Frontal Sinus—By J. H.BRYAN, Washington, D. C.—*Jour. of the Am. Med. Assoc.*, Feb. 26, 1898.

The author reviews the different methods of operation in this affection. He is of the opinion that the external operation is the one to be followed, if possible.

STEIN. (BISHOP.)

IV. LARYNX AND TRACHEA.**Treatment of Different Forms of Aphonia Due to Laryngeal**Lesions—COLLINS—*Phila. Polyclinic*, Sept. 10, 1898.

In a female patient who had suddenly become hoarse on account of a return of some papillomatous tissue on the middle of the right vocal cord, and beneath the cord, also situated over the left arytenoid cartilage, local palliative treatment was not of much service. In this case the internal administration of small doses of magnesium sulfata (10 grains three times daily) acted remarkably well. All other treatment was suspended, and the growths disappeared in a few months. Slight thickenings of the mucous membrane could only be seen after careful examination.

Case II.—A young girl, fifteen years of age, gave a history of gradual hoarseness, after singing or talking loudly. Chronic laryngitis was diagnosed, but while in attendance at the clinic she suddenly lost her voice. On examination a slight effusion of blood was observed upon the surface of the cords. Her throat was sprayed twice weekly with a solution of phenazone (20 grains to the ounce). Internally, one forty-eighth of a grain of mercuric chlorid was given as a tonic, three times daily. Later, potassium iodid (5 grains t. i. d.) to promote absorption of the hemorrhage. In two weeks the effusion had practically disappeared and the voice was much improved.

LEDERMAN.

Chronic Stenosis of the Larynx with Illustrative Cases—By

WILLIAM E. JONES, Camden, N. J.—*Jour. Am. Med. Assoc.*,
March 12, 1898.

The first case was one due to a prolapsed ventricle, and was treated and relieved by the galvano-cautery. The cause of the second case was doubtful, but probably it was due to a localized chondritis. Tracheotomy relieved and brought about a subsidence of the trouble. In the third case the condition was undoubtedly one of syphilis of the larynx. The internal administration of potassium iodid for four months after a tracheotomy brought about a recovery. Case four was one of carcinoma, in which tracheotomy was performed but a laryngectomy was refused. In case five the stenosis was the result following an attempt at suicide by cutting the throat.

STEIN. (BISHOP.)

Benign Incurable Paralysis of the Recurrent Laryngeal Nerve,

Following Measles—LERMOYEZ—*Revue Int. de Rhin.*, etc.,
June, 1898.

A woman of thirty years presented the signs of vocal paralysis, which had existed for twenty-seven years and had followed an attack of measles. The laryngoscope showed the left vocal cord motionless and in the cadaveric position; the right was freely movable and passed over the median line, but did not come in contact with the paralyzed cord.

The patient did not seem to suffer much from the paralysis, but whenever she contracted cold developed a violent cough. A diagnosis was made of the destruction of the left recurrent laryngeal nerve, due to an old tracheo-bronchial adenitis. SCHEPPEGRELL.

Paralysis of the Left Recurrent Laryngeal Nerve in Mitral

Stenosis—OSLER—*Am. Med. Surg. Bulletin*, Sept. 25, 1898.

Two cases were seen by the author, and in both instances were females. The well-marked features of mitral stenosis were present; symptoms of cardiac failure and edema, and complete recurrent laryngeal paralysis. There was nothing to indicate pressure in the thorax. Though the patients improved under treatment the laryngeal paralysis persisted. Two cases described by Ortnr, of Vienna, in which this pressure was due to a distended left auricle, are cited by the author. In all these cases the pericardium was adherent. A diagnosis of aneurism was made in one of the last two cases, but the autopsy showed the left auricle enormously distended and enlarged.

LEDERMAN.

A Case of Epithelioma of the Larynx; Laryngectomy and Partial Pharyngectomy; Death on the Eleventh Day from Exhaustion—E. L. SHURLY—*New York Med. Jour.*, July 16, 1898.

An unmarried woman of forty-five years suffered from dysphagia and hoarseness. There was pain in the left side of the larynx and

the patient was weak and emaciated. Examination showed the larynx filled with a growth of lobular appearance, principally on the right side. It was strictly confined to the larynx, and the cervical glands appeared unaffected. After a preliminary tracheotomy, the larynx and a considerable portion of the pharynx on the right side were removed. A microscopic examination of the growth showed it to be epithelioma. Death occurred on the eleventh day from exhaustion.

SCHEPPEGRELL.

Tuberculosis of the Throat; Its Treatment—H. M. THOMAS—*Am.*

Med. Surg. Bulletin, Sept. 25, 1898.

Constitutional and local measures are recommended. Circumscribed thickenings with a non-broken surface may be treated with creosoted iodine in glycerine or menthol in solution of olive oil. Tuberculous ulcers should be cleansed, and lactic acid (20 to 40 per cent) well rubbed in, has proven valuable. Mentholated olive oil injected into the larynx is serviceable. Inhalation of vaporized antiseptic oils act as a mechanical protection and allay distressing symptoms.

LEDERMAN.

Some Remarks Upon Syphilitic Manifestations in the Larynx—

P. T. VAUGHAN—*Atlanta Med. and Surg. Journal*, June, 1898.

The division of syphilitic manifestations into secondary and tertiary is not always satisfactory. The author has seen mucous patches occur in the throat fifteen years after the initial lesion, and gummata six months after the primary sore.

Only one case of primary syphilitic lesion of the larynx is on record. Gummata are commonly situated upon the posterior commissure, the arytenoid cartilage and the epiglottis. Syphilitic ulcers in the larynx have sharply defined borders, are excavated, have a purulent slough upon their floor, and are surrounded by highly inflamed mucous membrane, with comparative absence of pain. Tuberculous ulcers have ill-defined borders, are superficially situated, grayish in appearance, are not surrounded by inflamed mucous membrane, and the pain is severe and almost constant. Examination of the lungs and of the sputum will confirm the diagnosis. A serious complication in a patient suffering from syphilis is the development of tuberculosis.

Inunctions with mercurial ointment or the internal administration of salt of mercury is indicated when the secondaries appear, and the administration of iodide of potassium or sodium in the later stages.

SCHEPPEGRELL.

Painful Dysphagia Evidence of Syphilis—J. GAREL—*Maryland*

Med. Journal, Sept. 10, 1898.

This author claims that syphilis can be diagnosed at once, from this one symptom of persistent dysphagia at any stage. It is frequently the first and only symptom recognized by the patient. Under potassium iodid the pain disappears in forty-eight hours,

unless it is due to incipient cancer or tuberculosis of this region. Every person who complains that this symptom has existed for three or four weeks should be treated as a syphilitic.

(Rather a sweeping assertion, as frequently the symptom may arise from an enlarged lingual tonsil, or a hidden concretion in the faucial gland. M. D. L.)

LEDERMAN. □

Exophthalmic Goitre in Four Children in the Same Family—

BAYARD HOLMES—*Phil. Med. Journal*, June 11, 1898.

In view of the fact that exophthalmic goitre is usually considered rare among children, the author reports four cases, all members of the same family. The ages were twelve, nine and a half, seven, four and a half and two years, respectively.

SCHEPPEGRELL.

The Thyroid Gland in Goitre—MORELLO—*Revista Veneta de Scienze Mediche*, May 15, 1898.

The author has found the action of thyroid gland of undoubted value in parenchymatous goitre, but useless in the cystic form. When given in a small dose, but still sufficient for the case, it does not produce any general disturbance and is well borne by the patients. The curative influence begins to be manifested soon after taking the first dose.

Like all thyroid preparations, it increases the functional activity of the organs, augmenting the frequency of the pulse and respiration and raising the temperature. The activity of combustion and oxidation is increased, the quantity of fat diminished and the secretion of urine stimulated. The duration of the effect is in proportion to the length of the administration. When the desired effect is attained, it is necessary to resume treatment from time to time to prevent relapses. The author concludes that thyroïdin will supply the needed functions of the thyroid gland.

SCHEPPEGRELL.

Foreign Bodies in the Bronchi—LONDON—*Intercolonial Medical Journal, Therapeutic Gazette*, Sept. 5, 1898.

The case reported is that of a boy, seven years old, who inhaled an ebonite shirt stud into his bronchus. Asphyxia immediately set in, and great distress lasted for several hours. For three days pain was felt in the chest at a spot corresponding to the second right costal articulation.

During the following year the patient suffered from a constant cough and an attack of acute pneumonia which started with moderate hemoptysis, and finally with a purulent and offensive expectoration. At the end of a year it was noticed that no air entered the upper part of the right lung.

At the author's examination, fourteen months after the accident, there was great dyspnoea, constant coughing, profuse fetid expectoration, as much as half a pint being brought up in twenty-four

hours. Hectic fever was also a symptom. One inch of the fourth rib was excised. Puncturing the lung did not show any collection of pus. Some pus was found in breaking up some adhesions between the middle and upper lobe, and the author believed that he felt the body, but it immediately disappeared.

During a fit of coughing, after the patient had recovered from the anesthesia, the stud was expectorated. For a few days after this fortunate incident marked dyspnea was experienced, but the boy ultimately made a good recovery. As to prognosis, the author refers to the case of Dr. Gross, in which the foreign body remained in the bronchus for sixty years, but it is more likely to cause death in from one to five years.

Where septic symptoms exist it is justifiable to employ surgical exploration, but frequently the foreign body is not discovered and at times is expelled during a spasm of cough.

LEDERMAN.

Three Cases of Foreign Body in the Oesophagus—GEO. HEATON—

Phil. Med. Journal, June 25, 1898.

In the first case, a whistle was located, by means of the X rays, in the oesophagus at the level of the top of the sternum, the body being removed by oesophagotomy. In the second case, the skiagraph showed the presence of a penny, swallowed three months before, at the level of the sterno-clavicular articulation. In the third case, there was both a shilling and a penny in the oesophagus. The coin-catcher and a pair of curved forceps were successfully used in the last two cases.

SCHEPPEGRELL.

V. EAR.

The Hygiene of the Ear: In Health and In Disease—FAYETTE C.

EWING—*Med. Fortnightly*, July 15 and Aug. 1, 1898.

Two lectures of a comprehensive character, covering the hygiene of the ear in health and disease. The papers impress the necessity for a more general knowledge of the mechanism—and, therefore, its hygiene—of the ear among the laity as a protection against disease and quacks. The entire organ, external, middle and internal, is discussed.

A. A. (GOLDSTEIN.)

A Contribution to the Study of Foreign Bodies in the Auricular

Canal—CARETTE—*Revue Hebdomadaire de Laryngologie, Etc.*, May 28, 1898.

A ball from a revolver had lodged in the auricular canal, which could be removed only by an operation enlarging the natural passage.

SCHEPPEGRELL.

Death Following Removal of a Foreign Body from the Ear—

BRÜHL—*Monatsschrift für Ohrenheilkunde*, February, 1898.

Boy four and one-half years old stuck a stone in his left ear. Repeated attempts at removal by the village barber caused considerable bleeding, intense pain and subsequently suppuration.

Examination three days later revealed hæmatoma in external auditory canal, greatly swollen and inflamed canal, through which a thick pus exuded. Cold applications and instillation of 5 per cent carbolyzed glycerin was used. Other antiseptics and anodynes were tried without avail.

Two weeks later radical operative procedures were instituted. The auricle and posterior wall of the cartilaginous meatus were detached; the stone was oval in shape, and was found lying transversely in the bony canal, one end pushed upward toward the antrum. After chiselling part of the upper and posterior bony canal wall, the stone was removed. Malleus and incus were also removed. On the sixth day after operation patient had a chill, temperature, 105°.

Mastoid symptoms ensued. A thorough mastoid operation was performed, antrum was opened, upper and posterior bony wall was removed, mastoid cells widely exposed. Three days later child died. *Post-mortem*: Thrombo-phlebitis of left transverse sinus, pleurisy and bilateral pulmonary abscess.

This case illustrates the necessity of prompt surgical interference when a foreign body in the auditory canal or middle ear exists simultaneously with a suppurative otitis, and the possibility of a pent-up discharge offers a menace to the life of the patient.

GOLDSTEIN.

A Reply to the Question: What Is the General Practitioner to Do with Cases of Ear-Ache—FRANK B. SPRAGUE, Providence, R. I.—*Atlantic Medical Weekly*, August 20, 1898.

The conditions of which ear-ache is a prominent symptom may be divided into three cases:

1. Otalgia, reflex or local when there is no sign of inflammation.
2. Inflammatory conditions of the middle ear.
3. Inflammatory conditions of the external ear.

If the drum-head is normal, with no signs of inflammation, you probably have a case of otalgia, in which there is little or no disturbance of hearing.

In the inflammatory conditions of the external ear there is frequently a moderate disturbance of hearing, but this does not occur until the pain and inflammation have lasted some time.

There are two forms of acute, middle-ear inflammation; acute catarrhal otitis media and acute suppurative otitis media. The first causes more or less impairment of hearing and may lay the foundation for chronic catarrhal deafness, if not promptly and properly treated. It is characterized by a rapid development of effusion into the tympanic cavity. This form is most frequently caused by exposure to cold and wet, to the extension of an acute catarrhal inflammation of the naso-pharynx, influenza, etc. It frequently accompanies the exanthematous diseases, dentition and hyperplasia of the adenoid tissue in the naso-pharynx, and enlarged oral tonsils.

The first duty of the physician in suppurative cases is to relieve the pain by hot water, dry heat, etc., and incision of the drum-head when necessary.

Some of the unfortunate results of this disease are permanent impairment of hearing, caries of one or more of the ossicles or tympanic wall, suppurative inflammation of the mastoid antrum and cells, with more or less necrosis; then the more or less dangerous sequelæ, as thrombosis of the sigmoid or other sinuses, peri-sinus abscess, extradural abscess, cerebral or cerebellar abscess or erosion of the carotid canal. Any of which may cause death. Or it may terminate in a chronic otorrhea.

In acute suppurative otitis media, early, vigorous treatment is demanded. And, if practitioners would treat every case of ear disease rationally, many deaths would be prevented.

MACLEAN. (BISHOP.)

The Differential Diagnosis of Reflex and Otophlogistic Otagia—

M. F. WEYMAN—*Med. Herald*, Vol. xvii, No. 9, Sept., 1898.

The author suggests the term *otophlogistic* (!) instead of the good old word *inflammatory* for those otalgias which are not purely reflex. He relates cases illustrating both forms, and presents a differential table of the symptoms of each.

EATON.

Acute Inflammation of the Middle Ear—E. C. ELLETT, Memphis,

Tenn.—*Columbus Medical Journal*, August 16, 1898.

One of the most common affections of the middle ear is acute otitis media. The large majority of cases are acute catarrhal inflammation, with serous and mucous exudations.

The one great symptom for which patients seek relief is pain, *i. e.*, ear-ache. There will be more or less symptoms of the febrile state. In children this must not be mistaken for cerebral or meningeal irritation. Often a discharge from the ear is the first intimation of the real trouble. Within twelve to twenty-four hours from the onset of the attack, the canal is normal, and the drum membrane will show redness of the upper portion and a red band along the malleus handle. A later stage will show the middle ear full of fluid, with general redness of the drum membrane, and a bulging of it to a varying degree, with the malleus handle showing as a depressed central streak. The third stage will show maceration of the epithelium of the canal and membrana tympani.

In all stages put the patient to bed, or keep him quiet, give a calomel purge, followed in six hours by a saline laxative and give an opiate. Locally to relieve the pain apply dry heat. In the early stage 15 per cent carbolyzed glycerine may be applied. If the membrana tympani is bulging and painful it may be incised, and the middle ear should be treated as an abscess cavity.

MACLEAN. (BISHOP.)

Sclerosis of the Tympanum—CASTEX—*Journal des Practiciens*, June, 1898.

Treatment consists in the administration of iodine and bromides, and in the mobilization of the tympanum and ossicles by insufflation with Itard's sound. SCHEPPEGRELL.

Painful Paralysis of the Facial Nerve with Herpes Zoster of the Ear—JACQUET—*Am. Med. Surg. Bulletin*, Sept. 25, 1898.

The disease affected the left side and persisted for five days, with the following symptoms:

1. Swelling of the preauricular region.
2. Painful edema of the left ear, with development of herpetic ossicles on the concha.
3. Painful point at the entrance of the auditory canal.
4. Pain on pressure of the facial muscles.
5. Increase of temperature of the skin on the left side.

This condition developed after exposure to a draught, and the author believes that sensory filaments are to be found as part of the seventh nerve. LEDERMAN.

Facial Paralysis in Acute Otitis Media—DAMIENO—*Revue Hebdomadaire de Laryng., d'Otol. et de Rhin.*, May 21, 1898.

The cure, which resulted within twenty-four hours, showed that the paralysis was due to a simple compression by the exudate and not to neuritis. SCHEPPEGRELL.

The Microbe of Influenza and Acute Grippal Otitis Media—

LOEWENBERG—*Le Bulletin Med.*, March 2, 1898, *Am. Med. Surg. Bulletin*, Sept. 25, 1898.

From extensive bacteriological research from the outset of the great epidemic of 1889-90, the author has found that Pfeiffer's bacillus is carried into the middle ear through the Eustachian tube by sneezing, blowing and swallowing. There it produces violent inflammation, but soon perishes, as the streptococci of the ordinary air of respiration destroys it and occupies the soil. For this reason, a diagnosis of grippal otitis cannot be made on the microscopic examination of the pus or blood discharged from the tympanic cavity.

The symptoms of otitis of grippal origin, as observed by the author, are as follows:

1. At the outset of the otitis, phlyctenules filled with blood appear on the tympanic membrane, and sometimes cover it completely, but rarely appear on the walls of the auditory canal. These never appear in ordinary non-grippal cases of otitis. When the phlyctenules break and blood oozes from them, the membrane itself is at first not yet broken through to give exit to pus from within the tympanum.
2. Perforation occurs through a kind of boggy prolapse of the tympanic membrane like a cow's udder, which ultimately may become pyriform.

3. Tendency to early complications with processes rapidly destructive in the mastoid, acute caries and necrosis, thrombosis of sinuses, pyemia. Osteitis may occur at the outset, developing quietly without accompanying signs of inflammation of the tympanic cavity, which may be invaded later.

4. Persistence of pains and buzzings of the ear, often more prolonged after the perforation than in non-grippal cases. The membrane once more healed and the scar closed by cicatrix, deafness may persist, though repair seems perfect.

Other constitutional signs of the grippe must be observed to establish a positive diagnosis. A bacteriological examination of the sputum will be confirmatory. Early paracentesis to lessen suffering and prevent damage is necessary in the treatment.

LEDERMAN.

On Intracranial Complications of Suppurative Otitis Media—

GRADENIGO—*Ann. des Mal. de l'Or., Etc.*, May 28, 1898.

After reviewing the various complications which may result from a suppurative process of the middle ear, the author concludes that we have not yet discovered, at least in the early part of its evolution, a pathognomonic symptom of an intracranial complication of otic origin.

SCHEPPEGRELL.

A Case of Acute Mastoiditis with Lobar Pneumonia, Followed by Lateral Sinus Thrombosis and Pyemia; Recovery Without Operation—FRANK S. PARSONS, Boston, Mass.,—*The Atlantic Medical Weekly*, Sept. 24, 1898.

After an acute otitis media, in a boy of seven years, mastoiditis developed. An operation was advised, but the parents declined to permit it. A week after the beginning of the mastoiditis there were marked symptoms of pyemia, with a remarkable range of temperature. At 8 o'clock one evening the temperature had reached 105.6° F. By 4 o'clock the next morning it had gone down to 96.2°, a variation of 9.4°. At 9 o'clock the same morning the temperature had gone up again to 105°, and by 3 o'clock in the afternoon it had decreased to 95.5°. Chills, sweats and variations of temperature lasted for two or three weeks, when the patient gradually recovered. Another unusual feature of the case was the presence of a well-defined pneumonia during the first five days.

In conclusion, the author says: "In the face of the facts, it seems like a formidable proposition to state that a case of mastoiditis should be followed by lateral sinus thrombosis, and recovery take place by absorption of pus, but such certainly seems warranted by the history of this case, if the symptoms have been rightly interpreted, and there seems no reasonable doubt that the construction placed upon them is correct."

ANDREWS. (BISHOP.)

A Case of Cerebellar Abscess—J. H. WOODWARD—*New York Med. Journal*, June 11, 1898.

The patient, a boy of fourteen years, suffered from purulent mastoiditis. The suppurating area was curetted, irrigated and drained, but neither the mastoid antrum nor the tympanum were invaded by the operation. A year later the otorrhea had recurred and the wound in the mastoid was discharging. The patient, however, recovered under antiseptic douching and dressing. The following year mastoid inflammation again set up, cerebral symptoms soon developing, which resulted fatally.

The autopsy showed a purulent pachymeningitis over the posterior surface of the petrous portion of the left temporal bone, the bone itself being carious. The entire white matter of the left hemisphere of the cerebellum had broken down into an abscess. The author urges the necessity of the most radical operation in these cases, so as to avoid leaving a pathogenic focus for future infection.

SCHEPPEGRELL.

Auricular Disturbances due to Late Hereditary Syphilis—C.

MONARI—*Revue Hebdomadaire de Laryngologie, Etc.*, May 28, 1898.

A late hereditary syphilis of the middle ear is frequently shown by the appearance of exuberant polypoid granulations, which are reproduced after being removed and which yield only to specific treatment. Otorrhea may no longer be present and only cicatrices and calcareous deposits found in the tympanic membrane.

As far as the internal ear is concerned, when a pronounced case of deafness is seen developing suddenly, syphilis should be at once thought of, and treatment instituted by the hypodermatic injection of pilocarpine and general specific treatment.

SCHEPPEGRELL.

The Pathology of the Cortical Auditory Center—F. ALT—*Monatsschrift für Ohrenheilkunde*, January, 1898.

In the pathology of the labyrinth there is still a vast unexplored field, and much light can be shed by accurate clinical observation. Research and conclusions of careful investigators indicate that a principle analogous to the decussating fibers in neuro-pathology exists between the cortical center on the one side and the auditory organ on the other; this can be determined, and the lesion localized by careful clinical investigation.

Alt records a case of crossed cortical deafness. Patient, male, aged thirty-three years, was suddenly affected with paralysis of the right side. He was also unable to speak, was deaf in the right ear, accompanied by vertigo and intense tinnitus aurium. Memory greatly impaired.

The paralysis gradually improved, and speech was partially restored. Patient gave history of syphilis contracted six years before and of having used liquor freely. No anti-syphilitic treatment had been received.

Tests for hearing indicated left ear normal. Bone conduction by C_2 tuning-fork is longer by nine seconds on left ear than in right. Voice tests and tuning-fork by air conduction not heard on right side.

Diagnosis, syphilitic endarteritis, resulting in thrombosis and softening.

A lesion of the left temporal lobe, involving the cortex and also the deeper areas would account for the combined symptoms of paralysis of right side, crossed cortical deafness, loss of memory and aphasia.

GOLDSTEIN.

VI. DIPHTHERIA, THYROID GLAND, ŒSOPHAGUS, ETC.

Diphtheria—J. E. WALSH—*New York Med. Journal*, June 18, 1898.

A study of the etiology, pathology and treatment of diphtheria. Antitoxin is recommended and the only bad effect observed is urticaria.

SCHEPPEGRELL.

The Early Diagnosis of Diphtheria—W. K. JAKES—*Medical Standard*, September, 1898.

The author emphasizes the necessity for an early bacteriological examination in all anginas. In malignant cases a direct diagnosis can be made. A little of the mucus or membrane taken directly from the site of the invasion, spread on the cover glass or slide, fixed by heat and stained, may then be examined. In other cases a culture can be made. In this the author has discarded the usual laboratory test tube, substituting the small metal culture box. The box, when inoculated, can be placed in the watch pocket, where the heat of the body will keep up the proper temperature, and the culture is ready for examination after three or four hours.

STEIN. (BISHOP.)

Diphtheria Affecting the Skin—GEO. SHARP—*Phil. Med. Journ.*, June 25, 1898.

Two cases are reported by the author, neither of which was secondary to a nasal or throat affection. The first had the appearance of herpes, which became purulent. The second case followed a burn on the cheek.

SCHEPPEGRELL.

Observations in Diphtheria—H. D. JEROWITZ—*Phil. Med. Journal*, June 18, 1898.

Involvement of the larynx is always sudden and appears as a new attack and not by extension of the diphtheritic process. Every case complicated by uremia observed by the author had post-diphtheritic paralysis.

SCHEPPEGRELL.

The Clinical Relations of the Loeffler Bacillus—F. L. WACHENHEIM—*New York Med. Journal*, June 18, 1898.

All cases of acute throat disease should be at once isolated without awaiting the result of bacteriologic investigations. Local antiseptics is indicated in every form of angina.

In view of the advantages of the early use of antitoxin, it should be administered at once in every case that presents a membranous deposit in the fauces, without awaiting the result of a bacteriologic examination.

SCHEPPEGRELL.

Diphtheria and Membranous Croup, Their Differential Diagnosis and Treatment—W. T. DAVIDSON—*Texas Med. Jour.* July, 1898.

An effort to establish a differential diagnosis by the clinical appearance as well as the bacteriologic examination. Antitoxin is recommended in diphtheritic laryngitis.

SCHEPPEGRELL.

Diphtheria and Antitoxin—D. C. MORIARTY—*New York Med. Jour.*, July 23, 1898.

Diphtheria antitoxin *per se* is harmless. It is practically a specific in diphtheria, but must be given early in full doses of a reliable product. No case is so far advanced that antitoxin should not be used, but early administration affords the best results, and it should be promptly given on clinical grounds without waiting for the report of the bacteriologist.

SCHEPPEGRELL.

Diphtheria Antitoxin: A Report of the Clinical Society of London—COMMITTEE CLINIC SOCIETY OF LONDON—*Phil. Med. Journ.*, June 18, 1898.

The Committee submitted its report at the last meeting of the Society, the general result of the inquiry being that in the cases of diphtheria treated with antitoxin, not only is the mortality notably lessened, but the duration of life in fatal cases is also prolonged. The injection of antitoxin was found to produce rashes, joint-pains and fever. With these exceptions, no prejudicial action was observed in the series of cases investigated, even when large doses were employed.

SCHEPPEGRELL.

Indications for Intubation—H. M. McCLANAHAN—*Phil. Med. Journal*, June 18, 1898.

Intubation should be performed in all cases presenting one of the following symptoms prominently: Deep epigastric recession with each inspiration; labored and prolonged expiration; extreme restlessness; spasmodic attacks coming on at intervals; persistent cyanosis.

In cases seen late it may be wiser to intubate and administer antitoxin rather than administer antitoxin and wait for its effects before intubation.

SCHEPPEGRELL.

The Pathology of Asthma—KANTHACK—*Phila. Med. Jour.*, June 11, 1898.

The author believes that there is a true anatomic basis for serious cases of asthma, and that the so-called neurotic tendencies, apart from hysteria and neurasthenia, are altogether of secondary importance. SCHEPPEGRELL.

The Possibilities and Limitations of Serum Therapy—W. E. SANDERS—*Phil. Med. Journal*, June 18, 1898.

As tuberculosis is usually local and does not produce immunity after infection, it is probably impossible to effect a cure by serum therapy. Spontaneous cure may, however, result from the formation of fibrous tissue around the foci, and this may account for the improvement reported in certain of the cases treated with the various sera. Another objection to the serum therapy of tuberculosis is the fact that many of the symptoms are due to secondary or mixed infections. SCHEPPEGRELL.

Prevention of Tuberculosis—M. M. SMITH—*Virginia Med. Semi-Monthly*, July 8, 1898.

The author urges the advantages of the recommendation suggested by the Medical Board of Health of the City of New York, viz.:

1. The establishment of tubercular hospitals for the treatment and control of indigent patients.
2. The adoption of suitable laws requiring all cases to be reported and restricted.
3. That all institutions that admit tubercular patients be subject to the inspection of the board.
4. That the people at large be taught about its dangers and sources of infection and methods of prevention. SCHEPPEGRELL.

The Influence of Sunlight on Tuberculous Sputum in Denver: A Study as to the Cause of the Great Degree of Immunity Against Tuberculosis Enjoyed by Those Living at High Altitudes—W. C. MITCHELL AND H. C. CROUCH—*Phil. Med. Journal*, June 11, 1898.

Tuberculous sputum loses its pathogenic character after exposure to sunlight for more than thirty-five hours. The dryness of the atmosphere, in addition to the solar rays, prevents the growth of the bacilli. SCHEPPEGRELL.

VII. INSTRUMENTS AND THERAPY.

Gelsemium—Preparations and Uses—H. H. NOTTAGE—*Atlanta Med. and Surg. Jour.*, June, 1898.

In enumerating the therapeutic uses of this drug, the author states that it is indicated in the first stages of colds and local con-

gestion of the lungs and bronchi. It is far superior to quinine in influenza; in the first stages of the disease, five drops of the tincture of gelsemium are given, and ten to twenty are placed in 118 c.c. of water and a teaspoonful administered every hour until pain is relieved. In many cases of acute coryza, gelsemium is considered almost a specific.

SCHEPPEGRELL.

Eucaïne Hydrochlorate "B" as a Local Anesthetic in the Nose—

L. S. SOMERS—*The Therapeutic Gazette*, Sept. 15, 1898.

Some time ago the author reported a series of cases in which he had tried eucaïne itself, and found that it was unsatisfactory as compared with cocaine. The present report is based upon observations made upon a series of cases in which another preparation of the same drug, called eucaïne "B," was employed.

This drug is non-irritating and possesses but a small degree of toxic properties. Its local anesthetic properties are not impaired by boiling.

The following conclusions are reached by the author from a study of the results obtained by the use of this drug, as compared with cocaine:

1. Eucaïne hydrochlorate "B" in three per cent solution produces as complete anesthesia of the nasal mucous membrane as does a four per cent solution of cocaine.
2. Its action is slower than cocaine.
3. The anesthesia is dissipated more rapidly than that produced by cocaine.
4. It is non-toxic in the strength and manner used.
5. As it has no apparent shrinking action on the turbinal investiture as has cocaine, it is therefore less valuable for nasal surgery than cocaine.
6. It is superior to the former variety of eucaïne because its toxic properties are less, it is more rapid in action, is non-irritating and the same degree of anesthesia may be produced by smaller amounts of the drug.

LEDERMAN.

The Advantages of Chromic Acid for Intranasal Cauterization—

H. LAVRAND—*Journ. des Sciences Med. de Lille*, June 18, 1898.

Chromic acid fused on a stylet forms the best means of making intranasal cauterizations, as it does not tend to form adhesions. It can be used with advantage to ulcerated points, and to the seat of adhesions after they have been broken down, to prevent their recurrence.

[In the abstractor's work on "Electricity in the Diagnosis and Treatment of Diseases of the Nose, Throat and Ear," the comparative value of mineral acids and the electro-cautery is discussed and the disadvantage of chromic acid in this connection pointed out.—W. S.]

SCHEPPEGRELL.

Acute Follicular Tonsillitis—F. INGALS—*Louisville Med. Monthly*, July, 1898.

In the treatment of this condition, the author recommends the application to the inflamed tonsil of a 50 per cent solution of guaiacol in oil of sweet almonds. Internally:

R—Potass. bromid 80 grs.
 Sodii salicylat.
 Tinct. opii deod. aa ʒi
 Cascara cordial ad. ʒi

M. Sig.—Teaspoonful every four hours in water.

SCHEPPEGRELL.

Eczema of the External Auditory Canal—EXCH.—*Louisville Med. Monthly*, July, 1898.

R.—Acid phos. dil. ʒi
 Tinct. ferri perchlor. ʒss
 Syr. limonis ʒvi

M. Sig.—Teaspoonful in wine glass of water after meals.

R.—Acid carbol. pur. gr. x
 Ungt. zinc. ox. benz. ʒiv

M. Sig.—Apply.

Begin the local treatment by cleansing the ears with this ointment spread upon cotton on the applicator, then make a free application of the same ointment. No fluids, soap or water must be used, as they nearly always prove deleterious. SCHEPPEGRELL.

Cimicifuga in Tinnitus Aurium—A. ROBIN AND MENDEL—*Méd. Moderne*, May 11, 1898.

Tinnitus may be considered the reaction of the auditory nerve to direct or reflex irritation. *Cimicifuga racemosa* possesses an action upon the auricular circulation and upon the reflex irritability of the auditory nerve. The average dose is thirty drops of the extract per day. Tinnitus of more than two years' duration is but little influenced by *cimicifuga*. SCHEPPEGRELL.

Argonin versus Boric Acid in Acute Suppuration of the Middle Ear—F. GRAY AND W. THOMPSON—*Tex. Courier-Record of Med.*, July, 1898.

Argonin solution is highly antiseptic, while boric acid, if at all, is very slightly so. Argonin in solution can be forced through a small perforation in the drum-head, thus reaching every part of the tympanic cavity and Eustachian tube. In a similar case, boric acid lies inactive in the external auditory canal.

Argonin can be used to flush the middle ear and tube, thus reaching every part of the inflamed tract, carrying out with it all products of inflammation. Argonin excites a positive and decided effect upon the suppurative process; boric acid possesses this property but feebly. Argonin stimulates the closing of perforations in the drum-head; boric acid has no such action. SCHEPPEGRELL.

The Action of the X-Rays on Cultures of the Tubercle Bacillus—F. POTT—*Médecine Experimentale*, June, 1898.

The author concludes that the X-rays have no effect on the bacillus of Koch, as the cultures, exposed to the action of the rays for a period varying from one-half hour to eleven hours, differ in no way from the unexposed cultures.

SCHEPPEGRELL.

Phthisis, or Pulmonary Tuberculosis—J. L. CAMPBELL—*Atlanta Med. and Surg. Jour.*, June, 1898.

Hygienic measures are recommended and Koch's tuberculin considered the ideal treatment

SCHEPPEGRELL.

The Serum Cure of Tuberculosis—DUCHATEAU—*Nord Med.*, June 15, 1898.

Two cases are reported as being cured by the serum treatment. The author admits, however, that further observations are required before these cases can be properly considered as cured.

SCHEPPEGRELL.

Spontaneous Cure of Tuberculosis and the Imitation of Its Methods—J. T. WHITTAKER—*Va. Medical Semi-Monthly*, June 24, 1898.

To each quart of blood, one-half ounce each of sodium bicarbonate and sugar of milk, and one dram of common salt are added. A pint of water thus prepared is added to a pint of blood, this being thrown up high into the bowel. Such enemata were retained with ease, and, after their repeated use, marked increase in weight and gain in nutrition were noticed, especially in anemic cases.

SCHEPPEGRELL.

The Use of Creasoted Oil for the Expulsion of Tracheal False Membrane After Tracheotomy and for Intra-Nasal Injections in Various Affections—WM. EWART—*Gaillard's Medical Journal*, August, 1898.

Ewart recommends the use of creasoted oil after tracheotomy to promote the expectoration of the false membrane, to assist in its detachment, to lessen its infectiveness *in situ*, and to stimulate and soothe the ulcerated mucous surfaces.

EWING. (BISHOP.)

BOOK REVIEW.

Die Krankheiten des Mundes. By DR. J. MIKULICZ and DR. W. KÜMMEL, Breslau, Germany. Large octavo, 250 pages, two chrome-lithograph plates and 62 text illustrations. Published by Gustav Fischer, Jena, 1898. American agents, Lemcke & Buechner, New York. Price, unbound, \$1.75; bound in cloth, \$2.00.

The most practical work on diseases of the mouth yet published. The reputation of the authors and collaborators, and the excellence of the work, characterizes this volume as a valuable book of reference for both the specialist and general practitioner. The class of diseases under consideration are exclusively those of the mouth. These include the general infections involving the mouth; diseases of the tongue, gums, lips and cheek, palate and uvula; an exhaustive section on tumors, benign and malignant; special chapters on diseases of the mouth in children (from the pen of Professor A. Czerny) and the consideration of the syphilitic affections of the mouth (by Dr. J. Schaeffer).

Special attention is devoted to the consideration of diagnosis and therapy. The diseases of the teeth, properly within the scope of this work, are not considered, as this section is classed more directly within the range of dentistry.

The illustrations are excellent and numerous. The volume is exceptionally well arranged and is a valuable addition to its class. M. A. G.

Hygiene of the Voice, with 27 illustrations, 144 pp., paper. By THOS. F. RUMBOLD, St. Louis. Witt Publishing Co., St. Louis, 1898. Price, 50 cents.

A subject of such importance as hygiene of the voice, when treated by so experienced a laryngologist as Dr. Thos. F. Rumbold, must possess unusual interest, and this expectation is fully realized in the work just published.

Being written in a simple style, refraining as far as possible from technicalities, the subject is made intelligible to the ordinary reader, while there is much useful instruction for physicians in general, and even the specialist will find many original investigations of interest.

The latter refers especially to a series of examinations of the soft palate, uvula and the azygos prominence made by passing the mirror through the nasal passage, the author having been fortunate enough to have a number of patients in which this procedure was practicable. The subject of the abnormal curvature of the epiglottis, resulting from disease of the throat in early life, and that of the undeveloped larynxes, due to the same cause, have been carefully investigated and are of much interest.

The care of the voice is described in detail, and the various conditions which have an adverse influence enumerated. The hygiene of the ears is also considered; the subject of the effects of the voice in cases of patulent Eustachian tubes deserves especial attention. The injurious influence of the majority of gargles, troches, "comforts," etc., is pointed out, and a few remedies mentioned which may be entrusted with safety in the hands of the patient. The effect of tobacco on the mucous membrane is carefully considered, and this has evidently been thoroughly investigated by the author, who insists on its injurious influence.

The book is illustrated and has a complete glossary of the technical terms used in the work. It can be heartily recommended to singers and speakers, for whom there is much matter of importance, and to physicians, who will find many points of interest for their practice. W. S.

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